



May 21, 2003

City of Las Vegas

Centennial Hills Sector Plan

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Centennial Hills Sector Plan

of the

City of Las Vegas General Plan

Prepared by the
Comprehensive Planning Division
of the
Planning and Development Department

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1. INTRODUCTION

For quite some time now, residents in the Northwest area of the City of Las Vegas have experienced unprecedented growth, development of a beltway, gridlock traffic during peak hours, and a feeling of a reduction in the quality of life they have enjoyed for years. It is for these reasons that a of the Land Use Element of the General Plan for the Northwest area has been undertaken.



This Plan is the result of a consensus-based approach to planning. Consensus planning has the support of the public because the public has been a part of the process. Involvement in the process means that the plans will be implemented over time and makes the implementation easier. Secondly, the wishes of the residents become known to the elected officials and appointed planning bodies.

The recommendations from this planning process evolved after many meetings with the citizens of the Northwest. The process developed issues, goals, objectives, policies and programs.

1.1 CENTENNIAL HILLS SECTOR PLAN AREA

The Centennial Hills Sector Plan area is bounded by the Moccasin Road alignment to the north, Cheyenne Avenue on the south, Decatur Boulevard to the east, and the Red Rock Preservation Area to the west (see Map 1, Centennial Hills Sector City/County Jurisdictional Boundaries map). The adopted alignment of the Beltway west of Hualapai Way (between Hualapai and the Red Rock Preservation Area and along Centennial Parkway) an eventual four-lane, divided, limited-access highway, is within the planning area.

The total area is approximately fifty-six (56) square miles. It coincides with the BLM urban disposal area boundaries in the Northwest.

1.2 SPECIFIC PLAN TOPICS

The topics that are the focus of this Plan are as follows.

1.2.1 Rural Neighborhood Preservation Area.

Of most importance to the residents of the Northwest was the preservation of the rural character of portions of the Northwest, now known as the Rural Neighborhood Preservation area (RNP) with a maximum density of up to two (2) dwellings per acre.

1.2.2 Centennial Hills Town Center Concept.

Designating commercial, high-density development, employment centers, and other non-residential areas was extremely important in terms of residential adjacency and preservation. The concept of locating these types of activities in a defined area is seen as an acceptable alternative to standard development that is usually widely dispersed. As a result of concentrating intensive commercial in one area the preservation of residential areas will be enhanced. Necessary commercial, service and employment opportunities will be readily available without intruding into northwest residential neighborhoods.

1.2.3 Circulation.

Studies have shown that without proactive street planning and construction, gridlock and low levels of service will be a problem. The street system should be planned to accommodate build-out traffic volumes. The City of Las Vegas Master Plan of Streets and Highways should reflect this planning and be amended as needed in order to preserve the necessary future right-of-way widths.

1.2.4 Planned Community District.

Areas of undeveloped land with large land ownerships (80 + acres) should be master planned. Certain smaller tracts should be designed to be compatible with adjacent master planned communities before development is approved.

1.2.5 Open Space.

Create and maintain open space with multi-use trails and recreational uses throughout the Northwest.







MAP ONE

City of Las Vegas

CENTENNIAL HILLS SECTOR

City/County
Jurisdictional Boundaries

-  City of Las Vegas
-  County
-  County Islands
-  Corporate Limits

2004 LAND COMPARISONS

City (34, 062 ac./53.22 sq. mi.)
County(15, 939 ac./24.9 sq. mi.)
County Islands(3, 361 ac./5.25 sq. mi.)

Adopted December 18, 1996 Bill Number 96-109

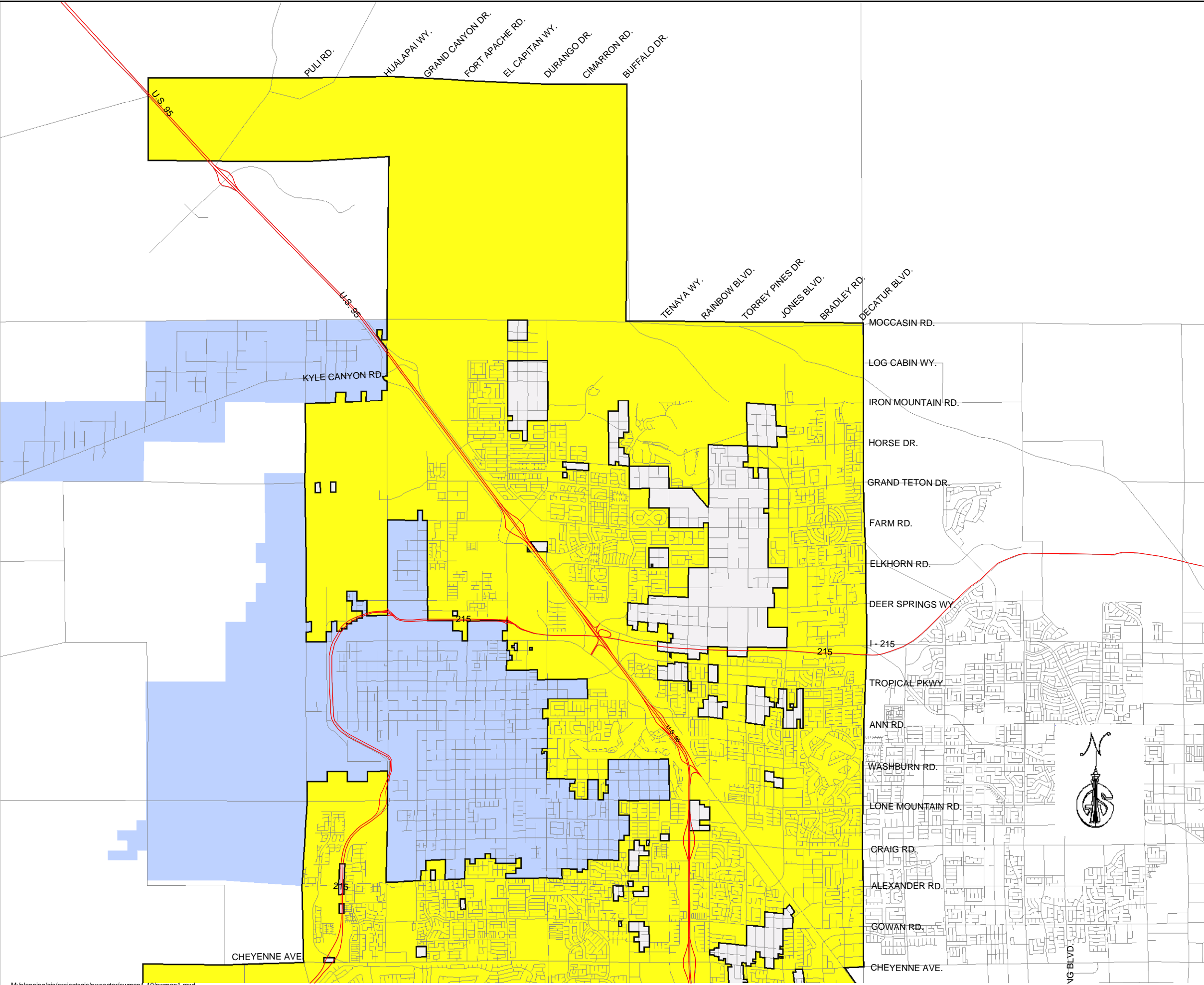
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Plotted: February 19, 2004



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1.2.6 Public Facilities.

Increase the opportunity to operate recreational facilities jointly with schools. Establish more public and private recreational opportunities and facilities throughout the area.

1.2.7 Development.

Existing projects currently being developed should be allowed to continue to develop in so far as the Health, Safety, and General Welfare of the City is not compromised.

2. CENTENNIAL HILLS SECTOR LAND USE

Land use is the central element of a plan. The Land Use Element defines the goals for the future pattern of development for a given area. Efforts were focused on refining and strengthening existing Land Use Categories as well as exploring options to plan for explosive growth potential. The Centennial Hills Sector Plan of the General Plan establishes:

- A range of densities for residential uses and intensities for commercial and industrial uses.
- Principles and standards which are to be applied in land use decisions.
- Coordination of a variety of elements which include: Community Facilities and Programs; Circulation through multi-use trails, streets, highways, and bike paths which link various land parcels; Infrastructure; and Urban Design.

The “Centennial Hills Sector Plan Concept Land Use Categories” and the “General Plan Land Use Categories” charts (Tables 1 and 2) show the proposed land use categories for the Centennial Hills Sector and equivalent proposed zoning categories used to implement them. In addition to zoning, compatibility standards for the Desert Rural (DR) areas have been developed for land use analysis. These include rural street standards requirements, design guidelines, lot access, open space and relationships of development to non-motorized, multi-use trails.



2.1 EXISTING LAND USE

Accurate assessment of existing land use is an essential step in developing the recommended future land use patterns in a plan. A major task accomplished in this plan was documentation of existing land use conditions in the Northwest. This included the preparation of an Existing Land Use Map for the Centennial Hills Sector of the City. The process involved measuring the number of acres of each (generalized) land use category, including vacant land, as noted in the Technical Appendix.

2.2 PLANNING DOCUMENT RELATIONSHIPS

This Plan is based on the City Of Las Vegas General Plan and its related regulations, programs, and legislation. This Plan includes more detailed precepts, conditions, and standards necessary and convenient for the systematic implementation of the elements of the General Plan. Various land uses permitted by this Plan are consistent with the objectives, policies, general land uses and programs described in the City of Las Vegas General Plan. However, the Centennial Hills Sector Plan focuses on issues which directly affect and are of greatest importance to the Centennial Hills Sector.

2.2.1 Relationship of Zoning to Centennial Hills Sector Plan of the Las Vegas General Plan.

Zoning is the major implementation tool of the Centennial Hills Sector Plan. It is the process whereby a specific zoning district classification is assigned to a land parcel by the City Council, following recommendation by the Planning Commission.

Zoning is based on the “police powers” of the community health, safety, and welfare, and in more recent years, the aesthetic impact of the land use.

The use of land as well as the density, intensity, height, bulk, setback and associated parking needs of buildings are regulated by the Zoning District classifications.

The intent of the General Plan is to preserve neighborhood characteristics and progressively offer a wider selection of housing types as the Land Use Categories successively become less restrictive and more

intense. Based upon Nevada Case Law (Nova Horizon, Inc. vs. The City of Reno) the courts have held that the Plan is “a standard that commands deference and presumption of applicability.” The Nevada Supreme Court has held the Master Plans in Nevada must be accorded “substantial compliance,” while Nevada statutes require that the zoning authority must adopt zoning regulations that are in substantial agreement with the Master Plan. However, the Nevada Supreme Court has also held that the General Plan is not a legislative straight jacket from which no leave may be granted.

2.2.2 Relationship Between the Concept Plan, Town Center Plan and the Centennial Hills Sector Plan.

There are three Plan maps in the Land Use chapter of the Centennial Hills Sector Plan. One is a Centennial Hills Sector Plan Concept Map (Map 2); the second is a Centennial Hills Sector Land Use Categories Map (Map 3); and the third is the Centennial Hills Town Center Land Use Map (Map 4).

The relationship between the maps is that the Centennial Hills Sector Land Use Concept Map (Map 2) shows the opportunities for development characterized by a framework of land use relationships. These establish the locations which indicate levels of residential, non-residential and mixed use opportunities. The Concept categories are linked to the General Plan and Centennial Hills Town Center categories and to zoning classifications. These provide a guide for the review of development applications.

The Concept Map provides a visual reference for the community about the direction of future growth. It is also linked to the Centennial Hills Sector Plan Map through the standard land use classifications and zoning categories.

The Centennial Hills Interlocal Land Use Plan (Map 3) is more specific in that it sets overall boundaries of each type of land use. The categories on this Map are linked to zoning classifications for implementation and clarity. The General Plan Map provides the bridge between the concept for the Northwest and the immediate need to delineate specific land development patterns in order to analyze amendment requests and development trends. It becomes the basis for demarcating the conceptual boundaries of areas such as the Centennial Hills Town Center, Village Centers and Planned Community Development.










MAP TWO

City of Las Vegas

CENTENNIAL HILLS SECTOR

Concept Land Use Map

General Land Uses

-  Rural Preservation
-  Rural
-  Residential Transition
-  Development
-  Planned Community Development
-  Village Center
-  Village Center Strip
-  Town Center
-  Park/Open Space

Adopted December 18, 1996 Bill Number 96-109

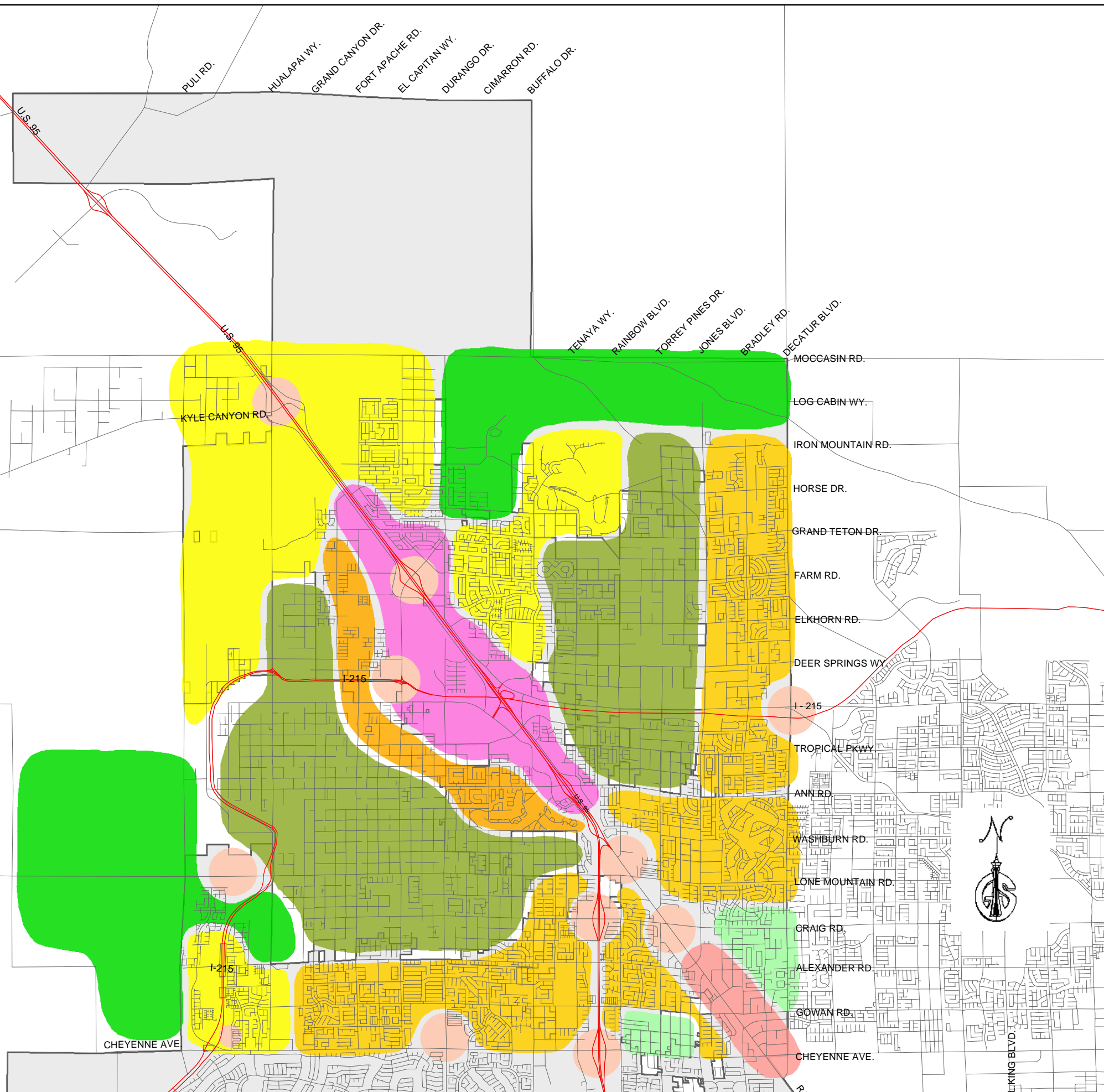
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The Land Use Categories Map designates residential areas for preservation while providing areas for public services, facilities, and future urban growth.

The Centennial Hills Town Center Land Use Map (Map 4) further defines the land uses anticipated for the creation of the mixed uses needed to develop an employment center in the Northwest that takes into consideration the standards which are in the Las Vegas Municipal Code (LVMC) promoting the Centennial Hills Town Center concept as being compatible with the surrounding areas and which provide a traditional urban atmosphere.

Future Land Use categories are shown in Tables 1 and 2. Table 1 correlates the Centennial Hills Sector General Plan Land Use Categories with the Concept Plan categories. Table 2 correlates the General Plan to the proposed Zoning District classifications.

Each Land Use Category permits specific zoning districts. This provides consistent determination of prospective land uses. Development proposals will be reviewed in terms of density and/or intensity compatibility as well as other factors such as use compatibility (both existing and proposed), infrastructure capacity, urban design requirements, and traffic circulation, etc.

2.3 LAND USE CATEGORIES

The three broad land use types, residential, commercial, and industrial, are subdivided into more specific categories, based on densities and intensities. These categories, together with various community amenities such as parks, recreational facilities, open space, schools, and other public facilities are designated on the recommended Centennial Hills Sector Land Use Categories Map.

**Table 1. Centennial Hills Sector Plan Concept Land Use Categories
(Comparison of General Plan Land Use Categories and Concept Plan
Land Uses)**

| Concept Plan Category | Description / Comments | Equivalent General Plan Categories |
|--|--|--|
| Rural Neighborhood Preservation Area (RNP) | Rural Residential | Rural Neighborhood Preservation (RNP) |
| Rural (R) | Rural Residential | Desert Rural (DR) Rural (R) |
| Development Area (DA) | Existing subdivided areas | Medium Low Residential (ML) |
| Residential Transition Area (RTA) | Varies in density related to proximity of Town Center. | Low (L) Medium Low (ML) |
| Neighborhood Center (NC) | Neighborhood service center - commercial service. Too small to show on plan. Occurs in PCD and Master Plans. | Service Commercial (SC) |
| Village Center (VC) | Designed commercial, Limited commercial, Buffer residential, Offices | Service Commercial (SC) Medium Low Attached (MLA) Office (O) |
| Town Center (TC) | General commercial Planned Development | Service Commercial (SC) General Commercial (GC) Office (O) Light Industrial / Research (LI/R) High Density Residential (H) |
| Planned Community Development (PCD) | Planned communities, Planned developments, Commercial, and Mixed use. | All Categories |
| Parks and Open Space | Civic district | Public Facility (PF) Park (P) School (S) |



2.4 CONCEPT AREA CATEGORIES

The conceptual categories define the “character” of the northwest planning area and are defined as follows:

Rural Neighborhood Preservation Area (RNPA) (0-2 DU/AC.)

The Rural Neighborhood Preservation Area concept category is the designation for the half (1/2) acre or larger rural lot development. This area is composed mainly of the Rural Neighborhood Preservation (RNP) General Plan Land Use category.

Rural (R)

The Rural concept category is in the southeast portion of the Plan area. It is largely developed and is expected to remain in its current status, which is a mixture of 1/3 and 1/2 acre lots.

Planned Community Development (PCD)

The Planned Community category allows for a mix of residential uses including L (Low), ML (Medium Low) and M (Medium) densities, maintaining an average overall density of 2-8 dwelling units/gross acre and includes a Village Center (VC), Neighborhood Center (NC), some business parks, public facilities, and office development. This area requires a master plan based on scheduled development, design, streetscape, infrastructure, and size of development tracts.

Residential Transition (RTA)

The Residential Transition Area category allows only residential uses along selected areas adjoining the Centennial Hills Town Center (TC). The residential densities increase as Centennial Hills Town Center is approached. Master Planned communities are encouraged in these areas.

Development Area (DA)

The Development Area category recognizes existing and proposed subdivision development that is occurring, or will occur, in the near future. Developments generally built in these areas range from 5.5 to 8.0 dwelling units/ gross acre.

Neighborhood Center (NC)

The Neighborhood Center category consists of sites that are five acres or less and are limited to neighborhood commercial services only. Neighborhood Centers with commercial services are located within master plans and based upon need to support the master plan area.

Village Center (VC)

The Village Center category consists of development nodes of approximately 20 acres per designated intersection quadrant and contains all the commercial services required by the local area. It is expected that these will be located near the major transportation areas of US 95 or the beltway interchanges.

There is also a Village Center Strip along Rancho Drive that has been limited to Service Commercial uses so that the character of the neighborhood can be maintained.

Centennial Hills Town Center (TC)

The Centennial Hills Town Center category is a mixed use employment center development category created by the intersection of US 95 and the proposed Beltway systems. Uses include mall facilities or shopping centers and other retail facilities; high density residential uses; planned business, office and industrial parks; and recreational uses with an emphasis on developments which are compatible with the surrounding areas and provide a traditional urban atmosphere (See Chapter 3).



MAP THREE

City of Las Vegas

CENTENNIAL HILLS
Interlocal Land Use Plan
City Land Use Categories

- Rural Neighborhood Preservation - up to 2 du/ac (0-2 du/ac)
- Desert Rural - up to 2.49 du/ac (2.1-2.49 du/ac)
- Rural - up to 3.59 du/ac (2.5-3.59 du/ac)
- Low - 3.6 to 5.5 du/ac
- Medium-Low - 5.6 to 8 du/ac
- Medium-Low Attached - 8.1 to 12 du/ac
- Medium - 12.1 to 25 du/ac
- High - 25+ du/ac
- Office
- Service Commercial
- General Commercial
- Park/Recreation/Open Space
- Public Facility
- Resource Conservation
- Right-of-Way
- Light Industrial/Research
- Planned Community Development
- Town Center

- Corporate Limits
- BLM Disposal Boundary
- Red Rock Canyon National Conservation Area

County Land Use Categories

- Rural Neighborhood Preservation - up to 2 du/ac
- Rural Estates - up to 2.5 du/ac
- Rural Density Residential - up to 3.5 du/ac
- Public Facilities
- Public Lands Management Area
- Planned Community Development

- E Elementary School
- M Middle School
- H High School
- P Park
- F Fire Station
- SS Electric Power Sub Station

SOURCE: City of Las Vegas, Department of Comprehensive Planning

Plotted: August 03, 2004



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- Revised: May 25,1999 GPA-03-99
- Revised: May 25,1999 GPA-04-99
- Revised: May 25,1999 GPA-05-99
- Revised: August 18,1999 GPA-16-99
- Revised: December 01,1999 GPA-26-99
- Revised: December 01,1999 GPA-37-99
- Revised: January 19,2000 GPA-35-99
- Revised: February 20,2000 GPA-41-00
- Revised: April 04,2001 GPA-39-00
- Revised: June 20,2001 GPA-18-00
- Revised: June 6,2001 GPA-07-01
- Revised: June 6,2001 GPA-08-01
- Revised: June 6,2001 GPA-09-01
- Revised: July 05,2001 GPA-14-01
- Revised: August 01,2001 GPA-12-01
- Revised: September 05,2001 GPA-21-01
- Revised: September 05,2001 GPA-23-01
- Revised: September 05,2001 GPA-26-01
- Revised: December 05,2001 GPA-36-01
- Revised: December 05,2001 GPA-37-01
- Revised: December 05,2001 GPA-39-01
- Revised: December 05,2001 GPA-40-01
- Revised: December 05,2001 GPA-41-01
- Revised: January 16,2002 GPA-43-01
- Revised: March 6,2002 GPA-52-01
- Revised: March 6,2002 GPA-53-01
- Revised: April 3,2002 GPA-56-01
- Revised: July 17,2002 GPA-10-02
- Revised: August 21,2002 GPA-11-02
- Revised: August 21,2002 GPA-19-02
- Revised: August 21,2002 GPA-24-02
- Revised: August 21,2002 GPA-25-02
- Revised: August 21,2002 GPA-27-02
- Revised: November 20, 2002 GPA-41-02
- Revised: January 08,2003 GPA-33-02
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- Revised: February 19, 2003 GPA-1410
- Revised: March 5, 2003 GPA-1414
- Revised: March 19, 2003 GPA-35-02
- Revised: April 2, 2003 GPA-1363
- Revised: May 21, 2003 GPA-1016
- Revised: May 21, 2003 GPA-1498
- Revised: May 21, 2003 GPA-1969
- Revised: May 21, 2003 GPA-2003
- Revised: May 21, 2003 GPA-2022
- Revised: June 18, 2003 GPA-1988
- Revised: August 20, 2003 GPA-2575
- Revised: August 20, 2003 GPA-2559
- Revised: August 20, 2003 GPA-2549
- Revised: August 20, 2003 GPA-2528
- Revised: November 19, 2003 GPA-2633
- Revised: November 19, 2003 GPA-3077
- Revised: February 18, 2004 GPA-3539
- Revised: February 18, 2004 GPA-3459
- Revised: February 18, 2004 GPA-3469
- Revised: February 18, 2004 GPA-3507
- Revised: February 18, 2004 GPA-3512
- Revised: February 18, 2004 GPA-3515
- Revised: February 18, 2004 GPA-3484
- Revised: March 17, 2004 GPA-3483
- Revised: May 19, 2004 GPA-4042
- Revised: May 19, 2004 GPA-4110
- Revised: July 07, 2004 GPA-4072

2.5 Land Use Category Definitions

The definitions for the Land Use Categories included in the Centennial Hills Sector Plan have incorporated the concepts previously defined and implement the generalized categories in the Concept Plan. Map 3, “Centennial Hills Sector Land Use Categories”, reflects the location of the General Plan Land Use categories for the Northwest. These categories include a range of densities (densities should be rounded up to the nearest one tenth) for each land use category as listed below:

Rural Neighborhood Preservation (RNP)

(A density of zero to 2 dwelling units per acre). The predominant residential life-style of these areas is single-family homes on large lots, many including equestrian facilities. This is generally a rural environment that permits greater privacy and some non-commercial raising of domestic animals.

In accordance with an Interlocal Agreement signed January 2, 2002, the City and Clark County designate those areas recognized for the above described lifestyle as Rural Neighborhood Preservation areas. These areas are shown on Map 3. The interlocal describes areas within the Centennial Hills Sector as “Excepted Areas”. The “Excepted Areas” are those that will be annexed into the city only by request of the individual property owners. Map 3 shows a boundary that encompasses those parcels that are within the “Excepted Areas” of the Interlocal and represents the limits of the Rural Neighborhood Preservation Neighborhoods.

Parcels in the excepted area at the time of the signing of the interlocal shall remain Rural Neighborhood Preservation areas whether the parcels annex into the city or not.

Desert Rural Density Residential (DR)

(2.1 to 2.49 dwelling units/gross acre). The Desert Rural Density Residential Category allows a maximum of 2.49 dwelling unit per gross acre.

The predominant lifestyle of the DR areas is also single-family homes on large lots, many including equestrian facilities. This is generally a rural environment that permits some non-commercial raising of domestic animals.

Rural Density Residential (R)

(2.5 to 3.59 dwelling units/gross acre). The Rural Density Residential category allows a maximum of 3.59 dwelling units per gross acre. This is a rural or semi-rural environment with a lifestyle much like that of the Desert Rural, but with a smaller allowable lot size.

This category is located generally adjacent to RNP, DR, and PCD areas. The density maximum is allowed depending on the density of adjacent existing and planned residential development. The lot size and density of development should be similar to that which is immediately adjacent to the new development.

Local supporting uses such as parks, other recreation facilities, schools and churches are allowed in this category.

Low Density Residential (L)

(3.6 to 5.5 units/gross acre.) This category permits single family detached homes, manufactured homes on individual lots, gardening, residential planned developments, and planned community developments.

Local supporting uses such as parks, other recreation facilities, schools, and churches are allowed in this category.

Medium Low Density Residential (ML)

(5.6 to 8 dwelling units/per gross acre.) This density range permits single family compact lots and zero lot lines, manufactured home parks, and residential planned development.

Local supporting uses such as parks, other recreation facilities, schools and churches are allowed in this category.

Medium Low Attached Density Residential (MLA)

(8.1 to 12 dwelling units/gross acre.) The Medium Low Attached Density Residential category permits a maximum of 12 dwelling units per gross acre. This category includes a variety of multi-family units such as plexes, townhouses, condominiums, and low density apartments. This category is an appropriate use for the residential portion of a Village Center or Centennial Hills Town Center Area. It is also an appropriate transitional use.

Medium Residential (M)

(12.1 to 25 dwelling units/gross acre.) The Medium Residential category permits a maximum of 25 dwelling units per gross acre. This category includes a higher density variety of multifamily unit types, up to three stories in height.

High Density Residential (H)

(The density range allowed is anything greater than 18 dwelling units/gross acre.) The High Density Residential category permits residential planned development and other urban residential developments.

Planned Community Development (PCD)

(2 to 8 dwelling units/gross acre.) The Planned Community Development category allows for a mix of residential uses that maintain an average overall density ranging from two to eight dwelling units per gross acre, depending upon compatibility with adjacent uses (e.g. development with a density of two units per acre will be required when adjacent to DR designated property). In addition, some public facilities and office projects may be used as buffers between areas of low density residential and areas of neighborhood commercial within the PCD.

Projects in undeveloped areas that are greater than 80 acres in size require a master plan (PD zoning). Projects less than 80 acres in size are not allowed within the PCD; however, infill projects may receive a waiver from this requirement.

Residential streets shall be designed to discourage through traffic, provide maximum privacy, and avoid the appearance of lot conformity. In order to protect existing lifestyles, adjacency standards and conditions may be required for new development.

Centennial Hills Town Center (TC)

The Centennial Hills Town Center category is intended to be the principle employment center for the Northwest and is a mixed-use development category. As compatibility allows, a mix of uses can include: mall facilities; shopping centers and other retail facilities; low to high density residential uses; planned business; office and industrial parks; and recreational uses.

The complex nature of the Centennial Hills Town Center area requires the development of a special plan. (Some of the same land use designations will be used, but will utilize the TC suffix to denote that different criteria will be used for project approval - see Chapter 3).

Office (O)

The Office category provides for small lot office conversions as a transition, along primary and secondary streets, from residential to commercial uses, and for large planned office areas. Permitted uses include business, professional, and financial offices as well as offices for individuals, civic, social, fraternal, and other non-profit organizations.

Service Commercial (SC)

The Service Commercial category allows low to medium intensity retail, office, or other commercial uses that serve primarily local area patrons and do not include more intense general commercial characteristics. Examples include: neighborhood shopping centers and areas. Theaters, bowling alleys, and other places of public assembly and public and semi-public uses. This category also includes offices either individually or grouped as office centers with professional and business services. This category includes the Neighborhood and Village Center concept areas.

General Commercial (GC)

General commercial allows retail, service, wholesale, office, and other general business uses of a more intense commercial character. These uses include limited outdoor storage or display of products, noise, lighting, or other characteristics not generally considered compatible with adjoining residential areas with significant transition. Examples of General Commercial uses include: new and used car sales; recreational vehicles and boat sales; mortuaries; and other vehicle-oriented uses such as hotels, motels, apartment hotels, and similar uses. This category includes the Village and Centennial Hills Town Center concept areas.



Parks/Recreation/Open Spaces (PROS)

This category allows large public parks and recreation areas such as public and private golf courses, trails and easements, drainage-ways and detention basins, and any other public usage of large areas of permanent open land.

Public Facilities (PF)

This category allows large governmental building sites, complexes, police and fire facilities, non-commercial hospitals and rehabilitation sites, sewage treatment and storm water control facilities, schools, parks and other uses considered public or quasi-public such as libraries, clubs and public utility facilities.

Resource Conservation (RC)

The Resource Conservation land use designation identifies those lands which, within the time frame of this plan, are not intended to be developed. These lands include the Red Rock Preservation Area, Paiute Indian Community, and the Quail Springs Wilderness Study Area. Properties involved with mineral extraction may also be so designated (RC).

2.6 LAND USE ISSUES

Through the review of existing conditions in land uses, infrastructure and public services and through a public meeting process, the following issues related to land use have been identified:

1. Restriction of high density housing in the Rural and Desert Rural (Rural Neighborhood Preservation) areas.
2. Commercial areas should be high quality and appropriately buffered from residential areas which have been developed in accordance with the concepts of the General Plan.
3. A Centennial Hills Town Center (see Chapter 3) will encourage commercial and mixed use development in a designated area. This area of concentrated commercial and residential uses in a mixed-use format is more appropriate than the continuation of strip commercial development in lower density areas. Such an area creates opportunities for design guidelines for landscape, streetscape, walls, buffers, and building setback and placement.
4. Rural Neighborhood Preservation Areas will sustain the character of the historical development patterns of large lot (1/2 acre and greater) and equestrian developments. The rural character of the area will be maintained by equivalent zoning for annexed areas, rural street improvements, low density development, and an absence of nearly all private non-residential development. This matches the County categories in the Lone Mountain Land Use Guide.
5. Features of the area, which include slopes, soils, washes, and geology (natural) and easements and corridors (man-made), need to be identified in land development decisions. These features can guide growth away from high cost service areas. These same features can be used creatively to generate view corridors and trails, and to protect the washes for drainage purposes.
6. The residential densities and land use intensities reflected in Table 2, "Centennial Hills Sector Plan Land Use Categories", are the maximum allowable. However, the Planning Commission and/or the City Council may require less intense development or development of lower density in order to protect the general health, safety and welfare of the community as well as maintain compatibility with and integrity of adjacent development.



Table 2. General Plan Land Use Categories
(Comparison of General Plan Land Use and the Zoning Ordinance Categories)

| Residential Uses General Plan Category (Density Range) | Zoning Abbrev. | Zoning District name* | Max. Density Dwelling Units/ Acre *** |
|--|-------------------|--|---|
| Rural Neighborhood Preservation (RNP) (0-2DUA) | R-A | Residence Estates | 1 |
| | R-E | | 2 |
| Desert Rural (DR) (2.1-2.49 DUA) | U | Undeveloped | 2 |
| | R-PD | Residential Planned Development | 2.49 |
| Rural (R) 2.5-3.59 DUA) | R-D | Single Family Residential - Restricted | 3.5 |
| | R-PD | Residential Planned Development | 3.59 ** |
| Low (L) (3.6 to 5.5 DUA) | R-1 | Single Family Residential | 5.5 |
| | R-MH | Manufactured Home | 5.5 |
| | R-PD | Residential Planned Development | 5.49 ** |
| Medium Low (ML) (5.6 to 8 DUA) | R-MHP | Residential Manufactured Home Park | 8 |
| | R-PD | Residential Planned Development | 8.49 ** |
| Medium Low Attached (MLA) (8.1 to 12 DUA) | R-2 | Medium Low Density Residential | 12 |
| | R-PD | Residential Planned Development | 12.49 ** |
| Medium (M) (12.1 to 25 DUA) | R-3 | Medium Density Residential | 25 |
| | R-PD | Residential Planned Development | 25.49 ** |
| High (H) (greater than 18 DUA) | R-4 | High Density Residential | 50 |
| | R-5 | Apartment | Unlimited |
| | R-PD | Residential Planned Development | Flexible |
| Commercial Uses General Plan Category (Density Range) | Zoning Abbrev. | Zoning District name | Equivalent Plan Categories |
| Office (O) | O | Office | O |
| | P-R | Professional Office and Parking | O |
| Light Industrial / Research (LI/R) | C-M | Commercial / Industrial | LI/R |
| | C-PB | Planned Business Park | LI/R |
| | M | Industrial | LI/R |
| General Commercial (GC) | C-2 | General Commercial | GC |
| Service Commercial (SC) | C-1 | Limited Commercial | SC |
| Neighborhood Center (NC) | N-S | Neighborhood Service | SC |
| Village Center (VC) | C-D | Designed Commercial | SC |
| | C-1 | Limited Commercial | SC |
| Town Center (TC) | T-C | Mixed Use | SC,GC,O,LI/R,M,H |
| Other Uses General Plan Category (Density Range) | Zoning Abbrev. | Zoning District name | Equivalent Plan Categories |
| Public Facilities (PF) | C-V | Civic District | P,PF |
| Parks/Recreation/Open Space | C-V | Civic District | P,PF |
| Planned Community | P-C | Planned Community | |
| Development (PCD) | PD | Planned Development | |
| | R-PD | Residential Planned Development | |

* Lower density residential zoning districts are permitted in higher density residential land use categories; less intense commercial classifications are permitted in more intense commercial districts.

** All R-PD density amounts are rounded to the nearest whole number. For instance, a density ranging from 4.5 to 5.49 units per gross acres is rounded to 5, thus allowing an R-PD to be developed up to 5.49 units per gross acres.

*** The number identified in this category represents the estimated maximum number of dwelling units which could be developed on a parcel of land one gross acre in size, based on the standards of the applicable zoning districts. This number varies slightly depending on the configuration of the parcel, the design of the subdivision or project, the topography, the required right-of-way dedications and other design factors.

2.7 Centennial Hills Sector Plan Consistency and Development Review Policies

It is the intent of the City Council that implementation of the adopted Centennial Hills Sector Plan of the Las Vegas General Plan be a coordinated activity among elected officials, boards and commissions, and City staff. The Centennial Hills Sector Plan shall be implemented by the adoption and enforcement of appropriate local regulations pertaining to the development of land and structures within the City of Las Vegas. It is the intent of the City Council that no development permit, subdivision of land, or application for zoning change may be recommended, authorized, approved, or issued by any administrative official, Board or Commission or by the City Council unless such development activity is determined to be in compliance and consistent with the adopted Centennial Hills Sector Plan of the Las Vegas General Plan maps and text which includes the Development Review Policies (see subsection 2.9B) and the Goals, Objectives, Policies, and Programs as set forth in this section and as they may be amended from time to time. The Planning and Development Department, in conjunction with other City departments, shall, on all zoning and subdivision applications, prepare a staff report to the Planning Commission and City Council which takes into account the following:

A. Plan Consistency Policies

It is the intent of the City Council that:

1. All parcels of land within the Centennial Hills Sector which are designated in a residential land use category as defined by both the maps and the text contained within the Centennial Hills Sector Plan shall be appropriately zoned. The dwelling unit density, lot area and frontage must be compatible with surrounding residential uses. The maximum density must not exceed that set forth in the Centennial Hills Sector Plan Land Use Categories chart. Large scale Planned Development projects (using PD, TC, and R-PD zoning) may exceed the maximum Centennial Hills Sector Plan of the Las Vegas General Plan densities on a net acre basis, provided the total gross project density per acre does not exceed that provided under the Centennial Hills Sector Plan of the Las Vegas General Plan.



2. No application for a subdivision of land or a change in zoning district classification which would have the effect of permitting the user of land or structures in a manner inconsistent with the Centennial Hills Sector Plan of the Las Vegas General Plan and/of the Land Use Classification System may be approved without filing a simultaneous request to the City Council to consider a formal General Plan amendment. In order for such zoning change to be approved, the City Council must hold a hearing, consider Planning Commission recommendations, and formally amend the Centennial Hills Sector Plan of the Las Vegas General Plan map and/or Centennial Hills Sector Land Use categories.
3. No land use variance which would have the effect of permitting the use, density or intensity of land or structures in a manner inconsistent with the Centennial Hills Sector Plan and/or Land Use Categories shall be approved. Setback, height, parking and similar bulk variances may be approved only in accordance with findings for hardship and other factual issues.
4. Building permits shall comply with all requirements and conditions including trail easements or prior development approvals before issuance of certificates of occupancy or final inspections.
5. Applications which require a tentative map and / or a public hearing (discretionary review) for any project, which at time of build out will generate or exceed 100 peak hour trips, as determined by the Traffic Engineer of the City of Las Vegas, shall submit for City review, at the time of the application request, a formal Traffic Impact Analysis report, prepared by a licensed engineer, demonstrating the individual and cumulative impacts of proposed land uses on the local and regional transportation network.

Such report and review shall identify the nature and quantity of traffic movement and circulation, average daily traffic (ADT) and peak hour traffic (PHT) volumes and mitigation requirements necessary to assure the maintenance of acceptable levels of service. Such Traffic Impact Analysis reports must adhere to the standards promulgated by the City's Public Works Department and adopted by the City Council.

Requests to extend zoning Resolutions of Intent (ROI) and Tentative Map approvals will subject the application to evaluation and adherence to development review requirements, adequate facilities and service reviews, and requirements of this section.

6. Applicants seeking to subdivide land in the City of Las Vegas after adoption of the Centennial Hills Sector Plan of the Las Vegas General Plan may submit for a tentative map or parcel map approval only when:
 - a. The proposed division of land is consistent with the adopted Centennial Hills Sector Plan of the City of Las Vegas General Plan as to density or intensity of proposed uses; and
 - b. The proposed lot areas and lot frontages are consistent with existing zoning or a proposed zoning district which would be consistent with the adopted Centennial Hills Sector Plan of the Las Vegas General Plan without necessity for an amendment public hearing.
 - c. The applicant has submitted a traffic impact analysis as defined in paragraph 2.9. (A.5).

Meeting the above requirements shall not preclude the City Council from requiring a public hearing for site development plan reviews.

B. Development Review Policies

It is the intent of the City Council that no City Official, Board, Commission, or the City Council shall recommend, approve, authorize, or grant any project or development permit which is not consistent with the following Development Review Policies. It is the intent of the City Council that authorized City Officials, Boards, Commissions, and the City Council of the City of Las Vegas, as the case may be, shall make findings that any recommended project approval and all applications for development permits are consistent with the provisions of this section and shall approve such project or development permit only when the following requirements are met, provided however that a project or development approval may be granted on the condition that the developer agrees in writing that no certificate of occupancy and/or final inspections will be issued/made until the following conditions are met:

1. The network of regional and local streets, highways, and intersections will have the capacity to serve the proposed development at an acceptable level of service. For purposes of this section, an acceptable level of service shall be determined by the City Council and may vary by type of street, intersection, or location. Unless otherwise approved by the City Council, no level of service shall be established on a designated street, highway, or intersection that results in a peak hour travel capacity below Level of Service D.
2. Wastewater treatment and disposal facilities will be made available prior to occupancy in sufficient capacity to serve the need of the proposed development.
3. Fire services will be adequate to protect people and property in the proposed development with adequate equipment and acceptable response times. For purposes of this section, the City Council may vary standards for adequacy and acceptable response times based upon the nature, location, character, density, and intensity of existing and proposed development.

2.8 GOALS, OBJECTIVES, POLICIES AND PROGRAMS FOR THE CENTENNIAL HILLS SECTOR LAND USE PLAN

GOALS: Implement a balanced land use plan supported by appropriate circulation, infrastructure, and public and private services.

Protect and enhance existing residential neighborhoods while providing essential goods and services to the residents.

Promote a mix of land uses that are appropriate and compatible with existing development.

Promote efficient use of existing public services; minimizing the costs of service extension.

Objective A: Develop and maintain the Centennial Hills Sector Plan as the principal policy document for this area for establishing future land uses in conjunction with community facilities, infrastructure systems, circulation systems, resource conservation, and compatible/needed development.

Policy A1.1: Participate in the preparation of Capital Improvement Plans and schedules for public facilities and services in conformance with the adopted Centennial Hills Sector Plan Land Use Categories or their resulting Master Plans.

Policy A1.2: In the annual review of the City's Capital Improvement Plan, support the applicable Centennial Hills Sector Plan Policies and Programs.

Policy A2: Encourage the use of vacant land adjacent to developed land in order to efficiently use infrastructure and protect undeveloped land or spaces from premature development.

Policy A2.1: Any development that is not immediately adjacent to all required public infrastructure shall be defined as being "leapfrog" development. All development determined as being leapfrog shall be responsible for providing all required and/or oversized infrastructure leading to and providing services for that development.

Objective B: Achieve a compatible balance of land uses that are standard throughout the Centennial Hills Sector by providing appropriate and compatible locations for all land use categories.

Policy B1: Provide for a variety of residential environments in the General Plan having urban, suburban, and rural character.

Program B1.1: Establish site design criteria for the Rural Neighborhood Preservation (RNP) areas. These areas will contain low density, residential land use districts which establish and maintain rural development and life-style, and will be protected from higher density uses.

Program B1.2: All master planned projects within the Planned Community Development (PCD) category shall be a minimum of 80 acres in size and smaller adjacent projects shall be compatible with the master planned community before development shall be approved. Provisions for open space shall also be expected in the PCD designated areas. Residential streets shall be designed to discourage through traffic and provide maximum privacy.

Existing residential development shall be protected with adjacency buffers which promote compatibility, including the usage of open space or reduced residential density. When abutting existing development, new compatible projects shall be no greater in density than the next more intense residential land use category (when immediately adjacent to Desert Rural residential development densities should be identical). These density buffers shall be not less than 600 feet in depth. In certain situations, the development of single-story office and some public facilities may be deemed as being an acceptable adjacency buffer.

Program B1.3: All residentially designated land use areas shall maximize the usage of improved subdivision designs through the utilization of curvilinear streets and minimum block lengths to the extent necessary to avoid conformity of lot appearance.

Program B1.4: Encourage the development of random vacant infill lots in substantially developed, single-family neighborhoods at densities similar to existing development.

Program B1.5: Section interiors should be developed with compatible single-family development and compatible uses such as parks and schools.

Policy B2: Develop and implement rural street standards to govern the paving, design, and use of local roadway systems to sustain the Rural Neighborhood Preservation areas and, where applicable, connect to the Beltway Trail System and selected available open space.

Policy B3: Plan for the appropriate location of multiple family residential uses throughout the Northwest. Such locations should be in the Centennial Hills Town Center or Village Center areas unless otherwise indicated in the adopted plan map.

Program B3.1: Require multi-family developments to be compatible with adjoining mixed uses and single-family uses through site planning and building design, setback and height requirements, landscape and wall buffers, and other buffers to adjoining uses.

Program B3.2: Except for the designated Centennial Hills Town Center Planned District, multi-family development should be located along major roadways, unless indicated otherwise in the land use plan.

Program B3.3: Buffering of adjacent single-family development should be done according to the City's adopted Landscape, Wall and Buffer Guidelines.

Program B3.4: Multi-family development will be allowed only in areas already served by public water or sewer.

Program B3.5: Develop standards for manufactured housing developments that require site designs compatible with adjoining residential uses.

Policy B4: Provide for a balance in the amount and location of commercial, institutional, and office land uses to serve the projected population and reduce traffic on major roadways.

Policy B5: Where appropriate, provide commercial and other employment centers in the Centennial Hills Sector Plan area to provide jobs, services, and traffic relief.

Program B5.1: Locate employment centers in areas so designated in the Centennial Hills Sector.

Program B5.2: Employment center development should be buffered from residential development by using other less intense land uses such as office space or parks.

Program B5.3: New industrial development should be directed into areas that minimize all truck traffic through residential areas and within proximity to major transportation corridors.

Program B5.4: Design large commercial projects (i.e. regional shopping center) as self-contained units which minimize or eliminate offsite impacts.

- Provide traffic acceleration/deceleration lanes at major access points.
- Provide common access between adjacent common or independent parcels.
- Provide on-site parking and maneuvering.
- Provide intersection capacity enhancements.

Program B5.5: Where appropriate, provide development of small scale neighborhood commercial centers at the intersections of major roadways adjacent to residential areas.

Program B5.6: Single-story professional offices should be considered as a buffering alternative between existing residential uses and more intense commercial development.

Policy B6: Establish the boundaries and design development criteria for the Centennial Hills Town Center.

Policy B7: Implement the Town Center Zone District within Centennial Hills as adopted by the City Council. The land use mix should reserve sufficient land for industrial, commercial and office space, and be designed in a harmonious and compatible manner.

Policy B8: Implement the Centennial Hills Town Center Development Standards Manual which shall establish standards and guidelines that will require residential, commercial, employment centers and office projects to be integrated as self-contained areas, thereby minimizing offsite impacts. The standards shall contain, at a minimum:

1. Prescribed land uses clearly designated, which are buffered from residential developments.
2. A process of design review.
3. Criteria for project approval which minimizes off-site impacts, provides common access between adjacent, independent parcels, and provides for on-site parking and maneuvering.
4. A streetscape program for urban streets in the Centennial Hills Town Center.

Policy B9: Implement the Landscape, Wall and Buffer Standards and the Design Standards Manual in Village Center and Village Center Strip locations that will provide essential goods and services throughout the Centennial Hills Sector. These standards include the following:

1. A process of design review.
2. Criteria for project approval which minimize offsite impacts, provide common access between adjacent independent parcels and provide for on-site parking and maneuvering.
3. Streetscape design program.
4. Maintenance improvement district for streetscape maintenance.
5. Placement of professional, medical, and dental offices in areas designated for office and village center uses.

Policy B10: Encourage and develop options, guidelines, and incentives for the use of innovative master development plans.

Program B10.1: Initiate special purpose districts, where appropriate to guide phased, mixed-use commercial and residential growth.

Program B10.2: Review all zoning categories to assure implementation of the Centennial Hills Sector Plan land use categories.

Objective C: Incorporate natural and man-made features into land use and development planning.

Policy C1: The City shall regularly review plans by agencies which consume land and affect residential development.

Program C1.1: The City shall review all plans within the Centennial Hills Sector Plan area by any agencies for rights-of-way, corridors, easements, substations, well locations, reservoirs and basins and other utility infrastructure. Such reviews shall consider joint corridor usage, trails, paths, and adjacent development and prescribe alternatives for consideration by the agency and City Council.

Objective D: Maintain the Centennial Hills Sector Plan in coordination with the land use, circulation, and infrastructure plans of all adjoining jurisdictions.

Policy D1: Cooperate with other agencies and jurisdictions to define planning and service opportunities and identify and resolve any conflicts along jurisdictional boundaries.

Policy D2: Develop and maintain a working relationship with adjacent entities in order to coordinate the development of circulation systems including the Beltway, trails, and rural streets.

Policy D3: Develop and maintain working relationships with adjacent entities to ensure coordinating and compatible land use planning.

Policy D4: Establish a growth pattern which will result in a more efficient and equitable provision of infrastructure, public facilities, and services.

Program D4.1: Seek the elimination of irregular City boundaries and County “islands” which result in overlapping service areas and incompatible land use categories.

Program D4.2: Develop a method to assess the costs and benefits of annexation requests in terms of revenues, services and facilities. Establish a fiscal impact review procedure to be utilized by all projects at plan preparation or zoning stages.

Program D4.3: Study a growth management program which integrates land development approval decisions and Centennial Hills Sector Plan adherence and consistency requirements with adequate public facilities and service standards.

Objective E: Protect the health, safety, and general welfare of the residents in the northwest planning area.

Policy E1: Private, gated communities shall provide safe and adequate street widths and unrestricted easement access for public safety vehicles, ambulances, utilities, public sewerage, and public drainageways.

Program E1.1: Develop standards and criteria for private, gated communities covering topics including but not limited to: guest parking, collector corridors, site design, drainage, sewerage, and utilities.

Policy E2: Schools should be located so that they are accessible to all residents and do not jeopardize the health, safety, or welfare of the residents.

Program E2.1: Where possible, orient and design schools so that school zones have the least impact on major and minor arterial streets.

Program E2.2: Where possible, locate schools so they are not adjacent to major and minor arterials.

Policy E3: Park and school sites should be developed jointly whenever possible, to ensure the best possible use of the site.

Program E3.1: Where possible, developers are to employ ample open spaces in the project development and integrate those open spaces with adjoining properties.

Policy E4: Developers shall dedicate land for use as a trail system as designated in the maps of the Recreational and Transportation Trails Elements of the Las Vegas 2020 Master Plan and the Joint Parks and Trails Plan.

Program E4.1: Where possible, use existing and future utility corridors for extension of a multi-purpose, non-motorized trail system.

Program E4.2: Develop a policy to obtain trail easements concurrent with the issuance of building permits.

Policy E5: Discourage development from locating beyond the design response time of existing fire stations unless the developer provides a site for a new fire station.

Program E5.1: Locate fire stations so that the minimum response time is achieved for all development.

Policy E6: Employ defensible space techniques in site design to minimize crime potential.

Policy E7: Where a homeowner's association is not feasible an improvement district should be used to maintain landscape areas and buffers.

3. CENTENNIAL HILLS TOWN CENTER LAND USE PLAN

3.1 FOREWARD

On December 18, 1996, the City of Las Vegas City Council adopted the Northwest Area General Plan which made provisions for a Centennial Hills Town Center. It also established a requirement to develop a Master Plan for the Centennial Hills Town Center at a level of detail not provided by the Las Vegas General Plan.

3.2 Centennial Hills Town Center

The Town Center of Centennial Hills has been envisioned in the Centennial Hills Sector Plan as being a high intensity, high-density, mixed-use development. This plan incorporates a complete mix of land uses including retail, office, residential, parks, schools and other public facilities. These uses are discussed in greater detail later in this chapter.

The Centennial Hills Town Center Plan, including its maps should not be construed as a document that requires or forces annexation of those properties which are a part of Centennial Hills Town Center and within the unincorporated county. Rather this document was designed to plan and to prepare for the future needs of the City of Las Vegas. Annexation will only occur at the request of the owner of the property.

The intent of the Centennial Hills Town Center concept is to prevent the sprawl of commercial and office projects into developing residential neighborhoods which exist in the Centennial Hills Sector Plan area by centrally locating the Centennial Hills Town Center around the Beltway/Highway 95 interchange. This concentration of economic activities will accomplish three (3) key objectives.

- a. The Centennial Hills Town Center will aid in the preservation of the lifestyle which exists in most of the residential neighborhoods located in the Northwest planning area.

**Table 3. Centennial Hills Town Center
Sustainable Needs for
300,000 People**

| Type of Business | Population | Number of Businesses Required | Number of Businesses Existing |
|--------------------|------------|-------------------------------------|-------------------------------------|
| Supermarket | 6,500 | 46 | 5 |
| Movie Theater | 29,000 | 10 | 1 |
| Beauty Salon | 3,700 | 81 | 14 |
| Dry Cleaner | 5,700 | 53 | 11 |
| Video Rental | 11,400 | 26 | 5 |
| Laundromat | 5,800 | 52 | None |
| Book Stores | 22,000 | 14 | 2 |
| Tennis Courts | 2,000 | 150 | 6 |
| Swimming Pools | 20,000 | 15 | None |
| Neighborhood Parks | 5,000 | 60 | 2 |

Source: ULI Shopping Handbook

- b. The Centennial Hills Town Center will reduce stress on existing as well as the future infrastructure systems impacting the Northwest planning area.
- c. The Centennial Hills Town Center will provide an employment base for a majority of the residents in the Northwest planning area.

The Centennial Hills Sector Plan projects a population of approximately 300,000 residents (see Appendix). Most of the retail, service and recreational needs for this resident population will be met by Centennial Hills Town Center. Table 3 indicates a sampling of retail service and recreational needs to sustain a population of 300,000 people. The first column indicates the type of business and the second column indicates the population required to support that business. The third column reflects the number of businesses required to sustain a population of 300,000 and the fourth column shows how many of each type of business currently exist within the Northwest part of the City. In addition, it is anticipated that of the 300,000 population, 160,000 of them will be working residents, needing both a place to work and to live.

Should the Northwest planning area develop without the Centennial Hills Town Center concept it is estimated that approximately 11,200 acres of varying types of commercial and employment land uses would occur. However with the Centennial Hills Town Center project, it is anticipated that approximately 2100 acres would be utilized.

By concentrating business activities within the Centennial Hills Town Center most residential neighborhoods will not be impacted by the traffic, lights, noise, and higher level activities associated with the intrusion of commercial development, thus allowing those neighborhoods to continue the lifestyle they currently enjoy. Neighborhoods furthest from Centennial Hills Town Center will have a maximum of four to five miles to drive to access the supporting business and services they need.

The Centennial Hills Town Center concept not only effectively concentrates development, but also the infrastructure required to sustain development. This results in substantial cost savings and helps avoid the over-sizing of utilities along section line roads throughout the Northwest Sector. This concentration of infrastructure should also result in substantial tax dollar savings.

Currently 54% of the entire population of the City of Las Vegas is employed. Transposing the percentage to the projected Northwest population means approximately 162,000 people in the Northwest will be employed at the time of buildout. The Centennial Hills Town Center concept will serve as the major employment center for the Northwest Sector. Therefore, Centennial Hills Town Center and its environs must be able to accommodate a majority of the jobs needed to sustain the Northwest population. In addition to centralizing commercial activities, the intent of Centennial Hills Town Center is to diversify the existing employment base from the current entertainment/gaming orientation, which dominates the City's economic system at this time, to an office and professional service-oriented employment base.

This document is designed to establish detailed regulations, standards, conditions and programs on a more defined scale than the General Plan provides. The area covered by the Centennial Hills Town Center Land Use Plan is depicted on the Centennial Hills Interlocal Land Use Map (Map 3) as the Centennial Hills Town Center. The Centennial Hills Town Center is an employment, recreation, commercial, mixed use area with uses including but not limited to retail facilities or shopping centers, single and multi-family residential, planned business and office parks, as well as entertainment and recreational facilities. Centennial Hills Town Center includes pedestrian-oriented design criteria which will include urban squares, village greens, storefronts abutting streetscapes, on-street parking in certain areas, and a rectilinear street grid. Pedestrian access to and from residential and commercial areas will be an integral component of all development. Other

portions of the Centennial Hills Town Center allow for more suburban uses accommodating vehicle traffic needs for ease of access without being forced to interface with the pedestrian-oriented developments.

This Centennial Hills Town Center chapter is a guide for development of the Centennial Hills Town Center area. Through its maps and text, it provides direction for the establishment of regulations and development standards that will affect the use of land within the Plan area. Among the subjects addressed are:

- a. Location of various land uses.
- b. Mandatory standards to regulate land use circulation, landscaping and open space, housing, access, and public/quasi-public facilities.

To ensure continuity, this Land Use Plan is consistent with the Centennial Hills Sector Plan goals, policies and implementation measures.

3.3 Public Involvement

The Centennial Hills Town Center Plan, like the Centennial Hills Sector Plan has been developed based on input from residents, Northwest area property owners, and professional planning staff. After the adoption of the Northwest General Plan in December 1996, planning for the Centennial Hills Town Center was initiated with the guidance of a consultant and participation of a group of developers whereby a draft plan was developed and presented to the Planning Department by the consultant.

The City then began to work with interested individuals and impacted owners. This is the culmination of over 30 meetings with residents, property owners, civic officials and staff as well as other public input both written and verbal. Residents representing the Timberlake subdivision have been very involved with this process. Other residents representing various Home Owners Associations including, but not limited to: Sheep Mountain, Tule Springs, Northwest Area, and Ranch House Estates, have participated in varying degrees and have provided valuable input for the development of this plan. The input received has aided tremendously in developing concepts and resolving the following issues:

Land Use: The designation of commercial and high density residential areas. These types of activities will be used with planned and managed growth policies to sustain growth, plan for infrastructure, and maintain the local economy.

Circulation: Traffic and transportation is becoming extremely difficult in the Northwest. Currently, the traffic in the Northwest is nearing a gridlock situation as citizens commute to the employment centers within the core of the City and the Strip.

Infrastructure: The pace of development in the Northwest is currently being suppressed due to the lack of supporting infrastructure.

Public Service: There is a need to increase the opportunities for recreational facilities throughout the Centennial Hills Town Center area.

Throughout the balance of this Plan, each of the above issues are described in the order as stated above and in more comprehensive detail.

3.4 CENTENNIAL HILLS TOWN CENTER LAND USE

3.4.1 Introduction.

The Centennial Hills Town Center is located in both incorporated and unincorporated portions of Clark County. The Centennial Hills Town Center planning area is 2213 acres in size and located on all four quadrants of the Beltway/Highway 95 interchange. The geographic setting is relatively flat with a few natural storm water ravines. The land slopes downward slightly from the west to the east. Existing development within Centennial Hills Town Center consists of the Timberlake subdivision, which is located at the northwest corner of the Beltway/Highway 95 intersection) and several small subdivisions just south of Centennial Parkway and east of El Capitan Way.

Most of the Centennial Hills Town Center is vacant and is primarily adjacent to the vacant lands bordering the north and west of the planning area. To the south some moderate residential development exists within the immediate vicinity of the Centennial Hills Town Center. Development east of Centennial Hills Town Center has been moderate with low and medium low single family developments under construction.

MAP FOUR

City of Las Vegas

CENTENNIAL HILLS

Town Center Land Use

Revised: December 1, 1999 GPA-30-99
 Revised: December 1, 1999 GPA-41-99
 Revised: April 4, 2001 GPA-38-00
 Revised: October 17, 2001 GPA-19-01
 Revised: December 5, 2001 GPA-36-01
 Revised: December 5, 2001 GPA-37-01
 Revised: March 6, 2002 GPA-53-01
 Revised: April 3, 2002 GPA-56-01
 Revised: August 21, 2002 GPA-19-02
 Revised: February 19, 2003 GPA-1392
 Revised: February 19, 2003 GPA-1350
 Revised: February 19, 2003 GPA-1417
 Revised: March 05, 2003 GPA-39-02
 Revised: August 20, 2003 GPA-2551
 Revised: December 17, 2003 GPA-3066
 Revised: February 13, 2004 GPA-3497
 Revised: February 13, 2004 GPA-3478
 Revised: February 13, 2004 GPA-3516
 Revised: May 19, 2004 GPA-4063
 Revised: June 16, 2004 GPA-4079

- General Commercial (GC-TC)
- Service Commercial (SC-TC)
- Urban Center Mixed-Use (UC-TC)
- Suburban Mixed-Use (SX-TC)
- Main Street Mixed-Use (MS-TC)
- Employment Center Mixed-Use (EC-TC)
- Low Residential (L-TC)/
(3.6 To 5.5 DUA)
- Medium Residential (M-TC)/
(12.1 To 25 DUA)
- Medium-Low Residential (ML-TC)/
(5.6 To 8 DUA)
- Medium-Low Attached Residential (MLA-TC)/
(8.1 To 12 DUA)
- Public Facility (PF-TC)

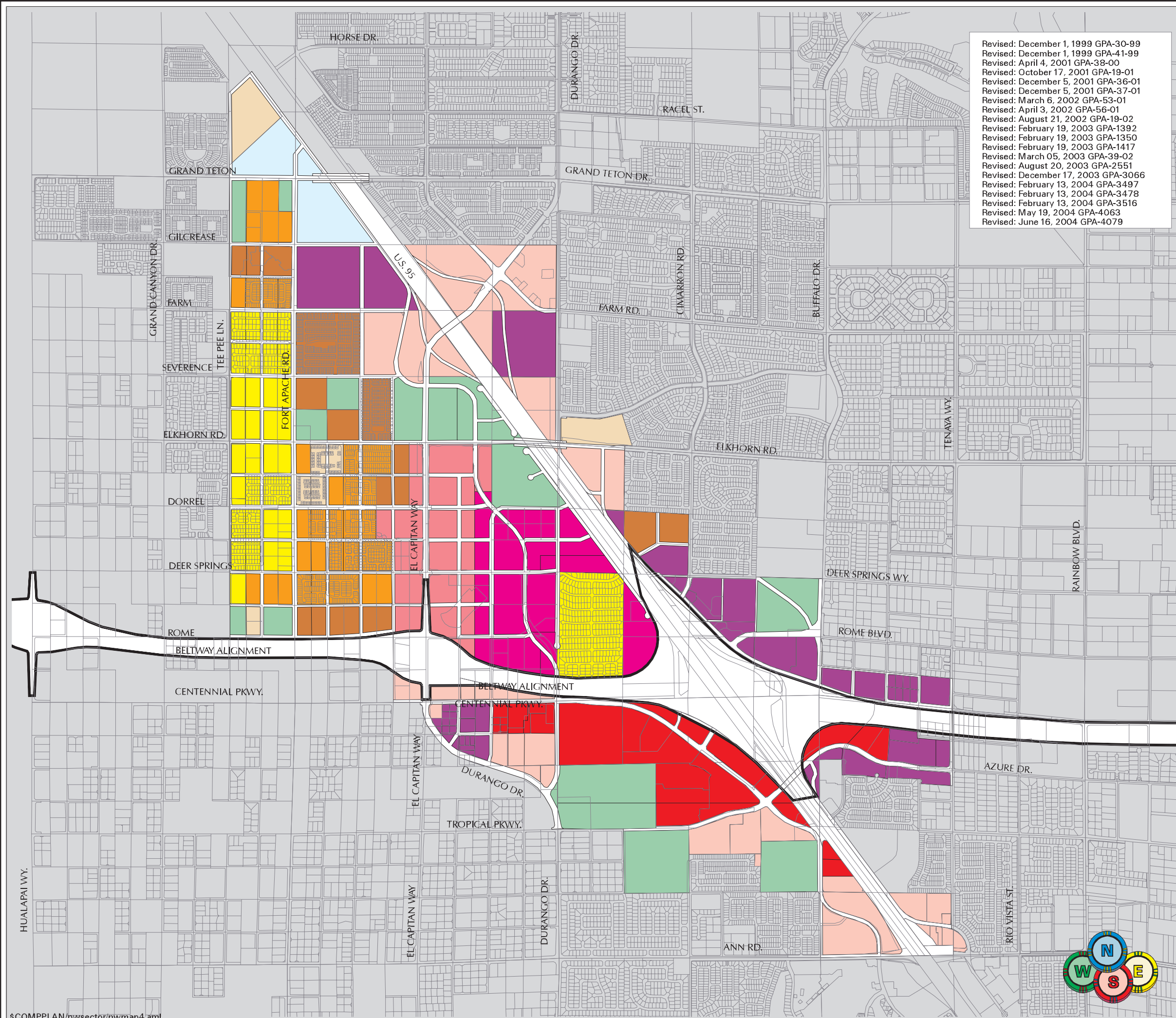
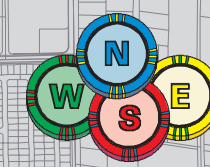
Adopted: May 24, 1999 GPA-01-1999

SOURCE: City of Las Vegas, Department of Comprehensive Planning

Plotted: June 23, 2004



GIS maps are normally produced
 only to meet the needs of the City.
 Due to continuous development activity
 this map is for reference only.
Geographic Information System
 Planning & Development Dept.
 702-229-6301



The mean elevation of the site is approximately 2450 feet above sea level. The Centennial Hills Town Center planning area boundaries include all and/or portions of Sections 7, 8, 16, 17, 18, 19, 20, 21, 27, 28 and 29, all in Township 19 South, Range 30 East, Mount Diablo Base, and Meridian.

The land uses that make up the Centennial Hills Town Center Plan are intended to compliment each other and any future adjacent developed uses surrounding it. There are nine land use categories that will regulate development of the Centennial Hills Town Center District. The location of these categories are depicted on the Centennial Hills Town Center Land Use Map (Map 4).

In order to minimize the impacts intensive activity can have upon low density residential neighborhoods, building height restrictions have been deliberately established to distance the tallest structures from the lower density residential uses. These height restrictions are pyramidal in concept with the highest structures being at a central location adjacent to El Capitan Way tapering down to a two-story maximum when abutting lower density residential neighborhoods.

Minimization of land use conflicts and the insulation of low density residential projects from intensive vehicular traffic, noise, and late hour activity generated by the more intensive land uses have been addressed by locating the most intensive land uses in such a manner that they will be distanced and buffered from most single-family uses by other less intensive land uses. The less intensive commercial categories have been located to accomplish two important strategic functions:

- a. To provide needed retail services (i.e. food, clothing, fuel, etc.) to each quadrant of the interchange to reduce the number of trips that will have to be made across the Beltway and Highway 95 overpass/underpass.
- b. To buffer the adjacent housing projects from the much more intensive uses which will be located within the GC and UC land use areas.

Other land uses include Low Density Residential (L), Medium Residential (M), and Public Facilities (PF). Where possible these uses should be used as land use buffers as well. Table 4 reflects a breakdown of the land use categories which make up the Centennial Hills Town Center and the amount of land dedicated to each category.

Some of the above land use categories match existing land use categories used elsewhere in the City's General Plan. These land use designations are inherently the same but are more restrictive within the Centennial Hills Town Center and are therefore shown on the Centennial Hills Town Center Land Use Map with a TC suffix (i.e. GC-TC). The definitions for each of the land use categories included in the Centennial Hills Town Center Land Use Plan will now be described.

The land use categories can be divided into four basic divisions consisting of Commercial, Mixed Use, Residential and Public Facilities. Each of these land use divisions can then in turn be broken down into other categories having varying degrees of intensity and density.

Table 4. Centennial Hills Town Center Land Use Breakdown

| Designation | Land Use | Acreage |
|--------------|---------------------------------|---------------|
| SC-TC | Service Commercial | 412.5 |
| GC-TC | General Commercial | 179.5 |
| MS-TC | Main Street Mixed Use | 142.9 |
| SX-TC | Suburban Mixed Use | 197.9 |
| EC-TC | Employment Center Mixed Use | 102.6 |
| UC-TC | Urban Center Mixed Use | 121.9 |
| L-TC | Low Density Residential | 247.9 |
| M-TC | Medium Density Residential | 101.3 |
| ML-TC | Medium Low Density Residential | 362.7 |
| MLA-TC | Medium Low Attached Residential | 3.8 |
| PROS Passive | Park, Recreation, Open Space | 74.9 |
| PROS Active | Park, Recreation, Open Space | 220.6 |
| PF-TC | Public Facilities | 222 |
| R-O-W | Right-of-Way | 557.1 |
| TOTAL | | 2947.6 |



3.4.2 Commercial Land Uses.

The commercial districts make up the core area of the land use configurations and allow a diversity of height limitations, intensities of use, and densities, and are intended to serve both the day to day and long range retail needs of the residents of the Northwest area. These land use districts will function the same as they would elsewhere in the City except there are more rigid design features which will be required of projects located in these areas. Some of these features include:

- a. Prohibition of open storage of finished product without the acquisition of a Special Use Permit (SUP).
- b. Prohibition of open storage of raw materials and or construction materials that are not related to onsite construction.
- c. Prohibition of the usage of barbed wire, razor ribbon or similar materials.
- d. Requirements for structures to be adjacent to the streets with the parking areas to the rear and/or side.
- e. Requirements for large structures to have a street side facade or heavily landscaped.
- f. More restrictive sign regulation.
- g. More efficiently designed parking lots to accommodate the needs of pedestrians.

The districts that make up the commercial group of land uses are described as follows:

A. General Commercial (GC-TC):

The General Commercial District allows all types of retail, service, office and other general business uses of a more intense commercial character. These uses will normally require a Special Use Permit and will commonly include limited outdoor display of product, lights, and/or other characteristics not generally compatible with the adjoining residential areas without significant transition. Examples include hotels, motels, and tourist commercial uses such as resorts and recreational facilities. When adjacent to the beltway, these uses may exceed the height of the beltway by one story, otherwise development within the GC-TC land use area is restricted to two stories in height.

B. Service Commercial (SC-TC):

The Service Commercial District allows low to medium intensity retail, office or other commercial uses that are intended to serve primarily the Northwest area and do not include more intense general commercial characteristics. Examples include neighborhood shopping centers, theaters, bowling alleys, and other places of public assembly and public/quasi-public uses. This district also includes office centers having professional and business services. These uses shall not exceed two stories in height.

3.4.3 Mixed Use.

The mixed use categories are intended to provide a greater variety of mutual supporting land use opportunities than would otherwise be available elsewhere in the City. In order to sustain Mixed Use Developments they must be characterized by the following:

- a. Mixed Use Developments must include three or more economic uses (i.e. retail, office, recreation, hotel/motel, etc.).
- b. Mixed Use Developments must have significant physical and functional integration (intensive land use) and uninterrupted pedestrian connections. All project components will be interconnected by pedestrian pathways/connectors. These come in a variety of forms including a vertical mixing of project components into a single city block: the careful use of centrally located focal points denoting important locations; the use of plazas, aerial bridges, and subterranean concourses; and the extensive use of elevators, escalators, moving sidewalks and/or other means of facilitating pedestrian movement. Pedestrian orientation must be a deliberate outcome of the planning process for each project.
- c. Mixed Use Developments must stay in conformance with a coherent plan. The plan must stipulate the type of uses, scale of uses, densities, architecture, etc. The Centennial Hills Town Center Land Use Plan is designed to allow the developers the greatest possible degree of latitude possible in creating and designing a mixed use project.

Other characteristics of a Centennial Hills Town Center mixed use project include the following:

- a. Towers are to be stepped back allowing light and visual relief.
- b. A variable (80% maximum) buildout to property line designed to create opportunities for plazas or other pedestrian oriented features.
- c. Wider, patterned sidewalks, shade trees and aesthetically comfortable street furniture that will add to the quality of the mixed use district.
- d. Widened sidewalks at intersections such that pedestrians only need to cross 24 feet of street pavement, as depicted in Figures 6 and 7 of the Town Center Development Standards.
- e. Upgraded street lighting and landscaping requirements coupled with a restrictive signage program that will add to the ambience of mixed use areas.
- f. Lower speed limits and multiple traffic calming devices intended to make the mixed use districts more pedestrian friendly.
- g. Parking lots and garages shall be located at project interiors rather than street side. All parking garages shall be architecturally consistent to the balance of the project of which they are a part of or to which they are adjacent.
- h. Specific architectural design criteria for all development at pedestrian level including the liberal application of unglazed glass and visually interesting building materials such as brick and fieldstone.
- i. Design regulations involving aesthetics and site layout have been developed for certain undesirable necessary uses (i.e. service stations, gas stations, drive thrus, etc.).

The Main Street Mixed Use (MS-TC) district and the Urban Center Mixed Use (UC-TC) district both allow residential (low, medium, and or high density) development as being part of any proposed project. If residential is

developed as a part of a project in either of these land use districts, the residential development is precluded from developing on the ground floor.

The districts which make up the Mixed Use category are described as follows:

A. Urban Center Mixed Use (UC-TC):

The intent of the Urban Center Mixed Use District is to encourage development with imaginative site and building design while maximizing the use of the property. These developments should have a compatible mixture of land uses and foster new employment opportunities and the provision of goods and services to the Northwest area of the City. Development within this land use designation will typically be multi-storied with offices and/or retail on the ground floor with similar or residential uses utilizing the upper floors. Minimum development shall be two stories in height. Developments in excess of 12 stories along the El Capitan corridor are possible with a Special Use Permit (SUP). There are no density limitations in the UC District.

B. Suburban Mixed Use (SX-TC):

The Suburban Mixed Use District can be characterized as being similar to the previously described service commercial district with the addition of medium density residential being a permitted use. It is intended to enable development with imaginative adjacency standards. Building and site designs which reflect a mixture of compatible land uses having either a vertical or horizontal character will maximize employment and housing opportunities. This district also is more reflective of suburban development than the Urban Center Mixed Use category. With exception to the area adjacent to the Beltway/Highway 95 interchange, development will typically be no more than two stories in height. Projects adjacent to the Beltway and/or Highway 95 may construct up to one story higher than the street infrastructure to which it is adjacent. Single story offices are recommended to be used as a land use buffer when adjacent to single family dwelling units.

C. Main Street Mixed Use (MS-TC):

The purpose of the Main Street Mixed Use District is to create a neighborhood that generates a sense of place, a feeling of being in a unique small town business district. Because of the intensive pedestrian orientation of the Main Street Mixed Use designation, structures must be a minimum of two stories in height and uses such as automobile services, outdoor sales yards, drive in businesses and other similar uses are prohibited from locating within this district.

This designation is intended to encourage a cohesive mix of interdependent uses including leisure shopping, with offices on the main floor and similar uses and/or medium to high density residential on the upper floor(s) in addition to providing amenities conducive to attracting pedestrian activity rather than automotive access and is therefore required to be a minimum of two stories in height.

Open air courtyards, plazas, and public infrastructure will be required of all projects and shall be designed and developed to enhance pedestrian activity while maximizing land use function. Retail and office uses adjacent to single family housing are restricted to a maximum of two stories in height. Twenty-four hour retail operations are prohibited from locating adjacent to single family housing.

D. Employment Center Mixed Use (EC-TC):

The Employment Center Mixed Use District is intended to accommodate needed non-polluting and non-nuisance services which under normal circumstances would not otherwise be found in a Central Business District. Given the land use constraints of the Centennial Hills Sector Plan, very little opportunity for light manufacturing uses exist within the Northwest sector of the City. Given the propensity for visual pollution, all uses within the district are required to be completely self-contained within a structure having a business park appearance. No outside storage is allowed. The Employment Center Mixed Use District permits the broadest spectrum of uses within the Centennial Hills Town Center while residential development opportunities are minimal.

3.4.4 Residential Land Uses

The residential categories have been derived as a result of three issues. First, single family residential has occurred prior to the establishment of the Centennial Hills Town Center land use designations and must now be incorporated into the plan. Secondly, residential buffers are needed on the west side to insulate the Centennial Hills Town Center from future residential development. The last issue revolves around the mixed use concept and creates the need for a resident population that can sustain the dynamics needed for a mixed use district.

Without a resident population the Centennial Hills Town Center would become a nine-to-five business canyon. However, the existence of a resident population will drive the need for public amenities including parks and libraries and for private amenities to provide evening activities such as dining and recreational opportunities.

There are three levels of residential activity within the Centennial Hills Town Center (Low, Medium, High). However, only Low Density and Medium Density have their own land use designations. All High Density and some Medium Density projects are expected to be included as a secondary or tertiary use within the various mixed use developments and will be evaluated as part of a mixed use development. The residential group of land use districts are defined as follows:

A. Low Density (L-TC):

The Low Density Residential District has a density range from 3.5 to 5.5 units per gross acre. This district permits single family detached homes as well as other more imaginative Low Density residential development with an emphasis on common open space. Local supporting land uses such as schools, churches, parks, and other public recreational facilities are also allowed in this district.

B. Medium Density (M-TC):

The Medium Density Residential District has a density range from 12 units to 25 units per gross acre. Projects within the M-TC district shall place an emphasis of maximizing usable common open space. As in Low Density Residential District, local supporting public and quasi-public uses are permitted.

3.4.5 Public Facilities.

This land use category is intended to permit the supporting governmental, not-for-profit and private land uses essential to the creation of a well rounded community. These uses include police substations, fire stations, libraries, parks, public swimming pools, churches and hospitals. Only one district (Public Facilities), has been established for these uses and is defined as follows:

A. Public Facilities (PF-TC):

The Public Facilities district is intended to accommodate any property used for a Public and/or Quasi-Public purpose. Any project owned and operated by a governmental agency (e.g. schools) or used solely by a non-profit organization (e.g. religious facility) qualifies for this land use designation. Utility projects can also qualify for this designation, but must adhere to the design regulations of Centennial Hills Town Center.

3.5 CIRCULATION

3.5.1 Introduction.

The circulation system constitutes the basic framework shaping land use and urban form. Streets not only move people and goods, but help define neighborhoods. The location and design of streets along with varying modes of transportation have significant effects on land use patterns, economics, air quality, noise, and aesthetic appearances.

The purpose of the Centennial Hills Town Center circulation pattern is to provide a comprehensive and coordinated circulation system to meet the various needs that will be imposed upon the Centennial Hills Town Center street system. Heavy emphasis is placed on pedestrian movement within the Mixed Use districts. In addition to making mixed uses viable and desirable, a shift towards pedestrian travel will have a significant effect on the impacts of vehicle use.

Most air pollution from vehicle emissions is unrelated to the length of the trip but rather from the number of starts and stops a vehicle makes. This reduction in the number of short car trips can improve air quality significantly. Because Centennial Hills Town Center is pedestrian oriented it makes this possible by having a resident population within or immediately adjacent to an employment center and/or needed goods and services so that walking becomes a desirable method of transportation for some people.



The backbone of the Northwest area's transportation service is made up by the Highway 95, Beltway and Arterial systems described in Chapter 4 of the Centennial Hills Sector Plan, most of which intersect within Centennial Hills Town Center. Both Highway 95 and the Beltway are limited access systems. In Centennial Hills Town Center, Highway 95 can be accessed at the Ann Road, Beltway and Durango Drive interchanges while the Beltway can be accessed by the El Capitan Way and Highway 95 interchanges.

In addition to the interchanges, a number of overpasses for major east/west arterial streets will be constructed in the Centennial Hills Town Center. These include the Tropical Parkway overpass which will connect the southeast and southwest quadrants, the Elkhorn Road overpass and the Grand Teton Drive overpass, both which connect the Northeast and Northwest quadrants.

The Beltway system includes an overpass at Fort Apache Road and an underpass at Durango Drive, all of which connect the Southwest quadrants to the Northwest quadrant. Tenaya Way will be the only North and South overpass on the east side of Highway 95. The interchange and arterial streets will be the primary streets for moving traffic in and out of Centennial Hills Town Center.

The Centennial Hills Town Center includes a frontage road concept that will enable traffic to travel from one quadrant to the next. In all cases the frontage roads utilize the overpass/underpass nearest to the Highway 95/Beltway interchange. The Main Street Mixed Use and Urban Center Mixed Use areas center around a grid pattern with alleys designed to accommodate pedestrians. This street pattern can be changed if a developer can show that pedestrian movement will be free from interaction with vehicles. Several of these routes (Main Street, Dorrell and Deer Springs) have been designated as focal points for pedestrian activity and are articulated intensively as such.

3.5.2 Development Issues.

In order to make development viable in the Centennial Hills Town Center, the frontage road systems must be developed first. Business success is dependent upon accessibility and the frontage road system bears the responsibility for making the four quadrants accessible to one another. If the development community is unable to complete this system it may have to be completed with a Special Improvement District (SID). Another street system which may need to be completed using a SID is the Main Street. This street cannot be built in a sawtooth fashion with differing landscaping and improvements without losing its visual appeal. Therefore, a SID will probably be used for the development of Main Street.

An issue of note centers on the El Durango curve (El Capitan - Durango connection). This route has been adopted by the Regional Transportation Commission (RTC) and can be found on the Clark County Master Plan Of

Streets and Highways. The City of Las Vegas believes the El Durango curve to be the best long range solution to the traffic issues involved in the southwest quadrant. El Capitan will be the principal interchange involving Centennial Hills Town Center with the Beltway. Durango will be the principal north - south arterial in the west side of the valley connecting Blue Diamond Road in the south to Moccasin Road in the north. If southbound or northbound traffic is impeded the traffic will load onto alternate routes especially El Capitan Way south of Centennial Parkway.

The Centennial Hills Town Center Circulation System has been designed to accommodate three differing functions:

- a. Vehicle traffic for local shopping needs (e.g. groceries, fuel, etc.).
- b. The traffic needs of an employment center.
- c. Pedestrian traffic on a scale similar to the strip but being much more supportive of pedestrian activities.

3.5.3 Street Hierarchy.

The Centennial Hills Town Center streets are not traffic channels but primary paths along which people and goods move. They serve as the dominant organizing feature around which buildings and open space develop. Centennial Hills Town Center streets must be viewed in an urban context in terms of linking the images and character and function of the streets and the development context of the properties they serve. In order to accomplish this, each Centennial Hills Town Center street shall be designed to be pedestrian friendly and demonstrate distinctive character created by streetscaping treatments which include various combinations of landscaping, plazas and building articulation.

The street hierarchy for Centennial Hills Town Center streets is as follows:

- | | |
|--------------------------|-----------------------|
| a) Parkway | 120 foot right-of-way |
| b) Frontage Road | 90 foot right-of-way |
| c) Main Street | 100 foot right-of-way |
| d) Town Center Collector | 80 foot right-of-way |
| e) Town Center Tertiary | 60 foot right-of-way |
| f) Loop Road | 90 foot right-of-way |
| g) Town Center Arterial | 80 foot right-of-way |
| h) Primary Arterial | 100 foot right-of-way |

Excepting the local streets that will utilize existing City standards, each street type will have specific design criteria to be implemented at the time of development.

3.6 INFRASTRUCTURE

3.6.1 Introduction.

The infrastructure for Centennial Hills Town Center is comprised of four major components. They include:

- Sewer Collection and Treatment System
- Flood Control System
- Water Distribution System
- Solid Waste

Infrastructure is the aggregate of the sewer, water, flood control and solid waste facilities that allow Centennial Hills Town Center to develop. Typically, streets and highways are included in discussions concerning infrastructure. However, streets, roads, and highways are discussed in the circulation section of the Centennial Hills Town Center Plan.

Typically, infrastructure is responsive to social objectives. These objectives include health, safety, and welfare, as well as economic development, employment and recreation needs. The connection between land use designations and these facilities is critical and subtle. Proper infrastructure planning allows for increased population densities and greater economical development opportunities. A commitment to increased infrastructure capacities will probably result in a justification for greater land use densities.

Land development requires water, sewer, trash disposal, drainage and roads. These facilities enable the buildings to be built, accessed, and safely used. Traditionally cities provide infrastructure; however, Las Vegas does not provide water or solid waste services. The Las Vegas Valley Water District provides water and a private corporation, Republic Services Disposal provides solid waste disposal. In all other capacities the City provides for the health, safety, and welfare of its citizens through wastewater collection and treatment facilities, the use of natural drainage channels and washes and constructed channels for flood control. Local road improvements and flood control are coordinated through funding arrangements with the Regional Transportation Commission and the Clark County Regional Flood Control



District. The City provides for coordinated infrastructure planning and construction with other providers. These planning and construction activities are affected by market demands, local and regional land use plans, and population estimates.

Once built, the government usually maintains infrastructure facilities. The long-term costs of these facilities on the City shows up in annual budget allocations to build, rebuild, and maintain them. Operation and maintenance costs are as important as capital construction costs in evaluating the ability of the City to provide infrastructure to support its growth and development.

3.6.2 Sewer Collection and Treatment System.

There are two types of sewer systems in the Centennial Hills Town Center: sanitary and storm sewers. Sanitary sewers carry wastewater away from residential, commercial, and institutional uses. Storm sewers carry the rainwater collected from roofs, roads, and other impervious surfaces to storm water retention facilities.

There are public and individual benefits which accrue from centralized wastewater collection and treatment systems. They include:

1. Improved health by minimizing exposure to waste-born diseases.
2. Improved standards of living by making housing more affordable for everyone by reducing lot size and location requirements for wastewater treatment. Septic systems are prohibited within Centennial Hills Town Center.
3. Promoting quality of life by eliminating the odor and other nuisances associated with wastewater disposal.

The provision of storm sewer, sanitary sewer, and water services has been sized in order to plan for growth beyond the actual growth patterns currently occurring.

The treatment capacity for the City exceeds the projected demands at final build-out of those areas available for development in the Northwest portion of the Valley. The Public Works Department extends the collection system to meet the needs of new customers by sizing and extension policies.

Sewer construction requiring additional capacity beyond what is required for a specific project is funded through the City's Capital Improvement Program (CIP). All other infrastructure costs associated with sanitary and storm sewers are borne by developers. These practices and policies will be implemented as part of the development of the Centennial Hills Town Center area.

State laws require developments of a density greater than two dwelling units to the acre shall connect to a sanitary sewage treatment facility. Clark County does not provide any sewage collection or treatment service to the Centennial Hills Town Center Planning area. Therefore, any developments at a density greater than two units per acre will require service from the City of Las Vegas. The City in consideration for providing sewer service will require either annexation or an annexation agreement, depending on the particular situation and the requirements of state statutes, prior to providing sewer service to those properties outside the City of Las Vegas corporate limits.

3.6.3 Flood Control System.

In the early days of Las Vegas, as in the rest of the southwestern United States, very little attention was paid to flood control. Currently the City of Las Vegas Five-Year Capital Improvement Plan includes a schedule for the construction of flood control facilities. The City coordinates its funding needs with those of the Clark County Regional Flood Control District (CCRFC). This flood control schedule is based on three levels of analysis:

1. Nominal Drainage Projects: This represents localized, inexpensive improvements. An example is a small size storm drain (18-24") that might connect to a larger existing storm drain.
2. City-funded Flood Control Projects (Neighborhood Plans): This flood control effort targets larger projects with planning areas up to two square miles. Typically, these projects consist of smaller but more numerous storm drains to safely convey flood waters through the City to the Clark County Regional Flood Control District facilities.
3. Regionally Funded Projects: No funding is provided by the City. There are several of these projects designated for the Centennial Hills Town Center area. These improvements are typically projects funded by the CCRFC Master Plan which will affect the Centennial

Hills Town Center. These projects frequently provide the large outlets for the smaller City funded storm drains. These funded improvements are depicted on the Centennial Hills Sector Existing and Proposed Flood Control Facilities Map (Map 10).

The flood control system for the Centennial Hills Town Center area consists of underground storm drainage lines that parallel Highway 95 and the Beltway and are both located in the northwest quadrant of Centennial Hills Town Center (see Map). These lines will feed into the Las Vegas Wash at the east side of the valley. In addition there is a diverter system that will take emergency flows from the northwest quadrant of Centennial Hills Town Center to a storm drainage retention basin that is located just south of Tropical Parkway and west of Highway 95. This basin then feeds a storm water sewer line that flows south to a major trunkline that parallels Ann Road and eventually flows into the Las Vegas Wash. The northeast quadrant is serviced by the trunkline parallel to the Beltway. The southwest quadrant is serviced by the diverter system and the southeast quadrant is serviced by the Ann Road trunkline.

Following several meetings with the RFC, it was agreed that these major flood control facilities in the Centennial Hills Town Center area would be underground facilities in order to maintain the appearance and high amenity objectives of the Centennial Hills Town Center concept.

3.6.4 Solid Waste Services.

Operation of refuse collection services within the City of Las Vegas is managed through a contract with a private provider, Republic Services Disposal. Refuse collection service inside the City limits is mandatory. Existing landfill sites are nearing capacity and the County is working with Republic Services Disposal in finding land fill sites to meet future demand.

3.6.5 Water Distribution System.

Water in Las Vegas comes from two sources: Surface water and ground water. Rainfall in the Las Vegas Valley is approximately four inches annually. About 30,000 acre feet per year (AFY) is naturally recharged into the ground water system. The major uses of water within the valley are for irrigation, as well as municipal and industrial applications. In 1989, in the Las Vegas Valley Water District service area, residential uses consumed 64% of the water.

The Centennial Hills Town Center planning area is supplied with water from the Las Vegas Valley Water District (LVVWD). The City of Las Vegas does not operate its own municipal water supply, which prohibits direct control over the timing, distribution or planning for the provision of water services.

The LVVWD has a master plan to provide water to the Centennial Hills Town Center area from the Southern Nevada Water Authority (SNWA) supply line. The water service distribution system is shown on Map 9. Water is currently supplied by the Water District to 2700 water pressure zone. Plans exist for the expansion of the system through the SNWA 60 inch supply line from Lake Mead. The line is expected to be completed along Deer Springs Road in approximately the year 2008. This will allow the LVWD to expand the distribution facilities through the 3090 water pressure zone. The Centennial Hills Town Center is in portions of the 2635, 2745, and 2860 water pressure zones.

3.6.6 Capital Improvement Plan.

The City has a Capital Improvement Plan for its infrastructure. This five year plan is reviewed and updated annually by the City Council. This allows for changes in revenue and expenditure patterns as well as changes in priorities. The Capital Improvement Plan (CIP) process provides order and continuity to the repair, replacement, construction and/or expansion of the City's capital assets. Capital expenditures, as defined by the City, are:

"... any undertaking or any physical improvement to land, provided the title will rest with the City of Las Vegas and the project has an estimated useful life in excess of five years and estimated cost in excess of \$20,000."

These expenditures compete for a finite supply of funds. Other funding requirements of the City include operations, maintenance, personnel and contracted services. Therefore, capital improvement decisions affect the availability (timing and dollars) of funds needed to support growth. These are related to the land uses of the General Plan and in this instance the Centennial Hills Town Center.

The Capital Improvement Plan includes undertakings to construct, renovate and improve City infrastructure and facilities. An interpretation of that phrase is a prioritization of construction of new facilities to support growth, reduce existing deficiencies, or remain abreast of replacement requirements for outdated infrastructure. The competition for fiscal resources

requires a coordinated inventory of information about existing development, approved development (approved and under construction) and adopted land uses in order to ascertain whether the City can fund or require funding of capital expenditures.

3.7 PUBLIC SERVICES

3.7.1 Introduction.

The City of Las Vegas has the general responsibility for the provision of basic public services and facilities to the Centennial Hills Town Center area. These services include streets, police protection, fire protection, and recreation including open space and park amenities. Public facilities compose the basic public physical structures and infrastructures. The Clark County School District has the responsibility for the provision of educational programming. Clark County is responsible for Health and Welfare programs.

Some of the issues involving the provision of Public Services to the Centennial Hills Town Center are as follows:

- a. New development creates a demand of increased level of all public services.
- b. New development creates a demand of classroom space, teachers, and school facilities.

3.7.2 Open Space and Parks.

The Centennial Hills Town Center area currently has one existing park and/or recreational facility, a neighborhood park with recreational facilities (baseball diamonds) near the intersection of US 95 and Elkhorn. A 40 acre park is proposed near the intersection of Buffalo and Deer Springs and site planning is underway for that park located adjacent to Durango Drive and Elkhorn Road. Future development of the site will include passive recreation opportunities and will serve the Centennial Hills Town Center area. Other potential sites and open space and parks exist including: a 30 acre storm drainage detention basin located southwest of the Buffalo Drive and Tropical Parkway intersection, a 40 acre site at the southwest corner of Buffalo Drive and Deer Springs Way intersection, a 60 acre site located on both sides of El Capitan Way just north of Elkhorn Road and a seven and one-half site at the northwest corner of the Fort Apache Road and Elkhorn Road intersection.

Location and standards for parks within the Centennial Hills Sector are detailed in the Parks Element of the Las Vegas 2020 Master Plan. Users of this chapter are encouraged to refer to this element for the plans and policy of the City in terms of Parks.

3.7.3 Trails.

A comprehensive system of pedestrian/bicycle and trails link residential neighborhoods of Towncenter with commercial, support activities, residential and/or recreational areas. Location and standards for trails within the Centennial Hills Town Center are detailed in the Recreational and Transportation Trails Elements of the Las Vegas 2020 Master Plan. Users of this chapter are encouraged to refer to those elements for the policy of the City in terms of Trails.

3.7.4 Fire Protection.

The Las Vegas Fire Department Station located at Wittig and Buffalo currently provides fire protection for the Centennial Hills Town Center. The second closest is at Lone Mountain Road and Rainbow Boulevard. A future fire station is planned to be built within the Centennial Hills Town Center on a two and one half (2 1/2) acre site on the northeast corner of Fort Apache and Elkhorn Road. In addition two (2) other fire station sites have been identified near Centennial Hills Town Center. These include one at Fort Apache Road and Moccasin Road as well as one located at Tropical Parkway and Durango Drive.

3.7.5 Law Enforcement.

The Centennial Hills Town Center area is currently served by the Las Vegas Valley Metro Police Department substation at Jones Boulevard and Highway 95, located approximately four miles from the heart of Centennial Hills Town Center. A proposed location for a future Metro Police Department substation is adjacent to Jensen and Cheyenne intersection.

3.7.6 Educational Facilities.

The Town Center area is currently within the boundaries of the Clark County School District. Future schools sites are located within, adjacent to and in the proximity of the Plan area as described below:

Elementary Schools:

1. Joseph M. Neal located at Tropical Parkway and Rebecca Road
2. Dean Allen located at Riley Street and Hammer Lane
3. Kay Carl located at Bradley Road and Corbett Street
4. Betsy Rhodes located at Sunny Springs Lane and Buffalo Drive
5. William and Mary Scherkenbach located at Iron Mountain Road and Tee Pee Lane
6. James H. Bilbray located at Brent Lane and Tee Pee Lane
7. Howard E. Heckethorn located at the Whispering Sands Drive and Bradley Road
8. Ernest May located at Torrey Pines Drive and Fisher Avenue
9. Claude and Stella Parson located at Thom Boulevard and San Miguel Avenue
10. Marshall C. Darnel located at Tropical Parkway and Park Street
11. Ruthe Deskin located at Red Coach Avenue and Monte Cristo Way
12. Eileen Conners located at Shadow Peak Street and Gilmore Avenue
13. Shelia R. Tarr located at Tee Pee Lane and Gilmore Avenue
14. Edith Garehime located at Campbell Road and Gilmore Avenue
15. Marc Kahre located at Valdez Street and Gowan Road
16. Dorothy Eisenberg located at Gowan Road and Quadrel Road

Middle Schools:

1. Lied located at Tropical Parkway and Bradley Road
2. Judge Myron Levitt located at Lone Mountain Road and Conough Lane
3. Anthony Saville located at Grand Teton Drive and Torrey Pines Drive
4. Ralph Cadwallader located at Elkhorn Road and Buffalo Drive

High Schools:

1. Centennial located at Hualapai Way and Centennial Parkway
2. Shadow Ridge located at Iron Mountain Road and Decatur Boulevard

3.7.7 Libraries.

Currently the Centennial Hills Town Center is served by the Rainbow Facility of the Clark County Library District located near Buffalo Drive and Cheyenne Avenue. A site for a future library within the Centennial Hills Town Center will ultimately be needed. A recommended site would be at Elkhorn Road and El Capitan Way.

3.7.8 Public Transit.

Public transit will play a major role in the success of Centennial Hills Town Center. The Regional Transportation Commission is responsible for the provision of public transportation services within Centennial Hills Town Center. Routes will be established and services provided when demand is met. Park-and-ride facilities will be needed to support a Fixed Route Guideway system when it is implemented. Until the Fixed Route Guideway system has been determined, the location of park-and-ride facilities cannot be determined. Ultimately a combination of a car pooling program, bus service trolleys and other mass transit programs will be initiated as the need warrants.

A comprehensive study of the transit system is needed to ensure that proper public transportation will exist to support the Centennial Hills Town Center concept. The City and the RTC should immediately begin this planning effort.



3.8 GOALS, OBJECTIVES, POLICIES AND PROGRAMS FOR CENTENNIAL HILLS TOWN CENTER

GOALS: Implement a balanced land use plan supported by appropriate circulation and infrastructure, as well as public and private services.

Protect and enhance the Centennial Hills Town Center land use concepts while maintaining as much as possible the overall lifestyle of the Northwest.

Promote a mix of land uses that are appropriate and compatible with the future needs for the provision of employment, goods and services.

Promote efficient use of existing public services, minimizing the costs of service extension.

Objective A: Develop and maintain the Centennial Hills Town Center Plan as the principal policy document of this area for establishing future land uses in conjunction with community facilities, infrastructure systems, circulation systems, and resource conservation.

Policy A1.1: Participate in the preparation of Capital Improvement Plans and schedules for public facilities and services in conformance with the adopted Centennial Hills Town Center Plan Land Use Categories.

Policy A1.2: In the annual review of the City's Capital Improvement Plan, support the applicable Centennial Hills Town Center Plan Policies and Programs.

Policy A1.3: Encourage the use of vacant land adjacent to developed land in order to efficiently use infrastructure and protect undeveloped land or spaces from premature development.

Objective B: Achieve a compatible balance of land uses standard throughout the Centennial Hills Town Center by providing appropriate and compatible locations for all land use categories.

Policy B1: Provide for a variety of commercial environments in the Centennial Hills Town Center Plan having distinct urban mixed uses and suburban character.

Program B1.1: Establish site design criteria for the Main Street and Urban Center Mixed Use Districts. These areas will contain commercial and office uses as well as higher density residential land uses which establish and maintain a respective distinct urban development life style. These districts must be protected from lower density residential uses.

Program B1.2: When abutting existing residential development, new projects in the Main Street Mixed Use area shall be restricted as to time of operation and types of uses. Other residential areas shall be protected by increased landscaping buffers and restricted land uses as well. In certain situations, the usage of single story office or similar uses, may be deemed as being an acceptable adjacency buffer.

Program B1.3: The Urban Center Mixed Use areas should be developed with higher density residential development which can include compatible recreational uses.

Policy B2: To sustain pedestrian activity within the mixed-use areas, and connect to the Beltway Trail System and other open space, implement Centennial Hills Town Center street standards to govern the paving, design and use of roads and sidewalks.

Policy B3: Plan for the appropriate location of medium and high density residential uses throughout the Centennial Hills Town Center. Such locations shall be located in the mixed use districts and other appropriately designated areas.

Program B3.1: Require multiple-family developments to be compatible with adjoining mixed use as well as single-family uses through site planning, building design, setbacks, and height requirements.

Program B3.2: Buffering of adjacent single-family development shall be done according to the City's adopted Las Vegas Urban Design Guidelines and Standards.

Program B3.3: Multi-family development will only be allowed in areas served by public water and sewer.

Policy B4: Provide for a balance in the amount and location of commercial, institutional, and office land use to serve the projected population and reduce traffic on major roadways.

Policy B5: Provide commercial and employment centered development in the Centennial Hills Town Center for the creation of jobs, services, and traffic relief.

Program B5.1: Locate limited manufacturing on a restricted basis within the Centennial Hills Town Center Plan.

Program B5.2: Development within the Employment Center Mixed Use areas should be buffered from residential development by using other less intense land uses such as office or parks.

Program B5.3: New industrial development should be within proximity to major transportation corridors and traffic directed into areas that minimize trucking through residential areas.

Program B5.4: Design commercial projects (shopping centers, etc.) as self-contained units which minimize or eliminate off-site impacts.

- Provide traffic acceleration/deceleration lanes at major access points.
- Provide common access between adjacent common or independent parcels.
- Provide parking and maneuvering on-site.
- Provide intersection capacity enhancements.

Program B5.5: Single-story professional offices should be considered as a buffering alternative between existing residential uses and more intense development.

Policy B6: Evaluate and assess the need for the establishment of a Maintenance Improvement District for Streetscapes within Centennial Hills Town Center.

Policy B7: Implement the Centennial Hills Town Center Development Standards Manual which shall contain, at a minimum:

1. Prescribed land uses clearly designated, which are buffered from residential developments.
2. A process of design review.
3. Criteria for project approval which minimize offsite impacts, provides common access between adjacent, independent parcels and provide for on-site parking and maneuvering.
4. A streetscape program for urban streets in the Centennial Hills Town Center.

Objective C: Incorporate natural and man-made features into land use and development planning.

Policy C1: The City shall regularly review plans by agencies that consume ;land and affect residential development.

Program C1.1: All public agencies which consume land and affect the development within Centennial Hills Town Center shall have their proposals reviewed by the City. Such reviews shall consider joint corridor usage, trails, paths, and adjacent development, and prescribe alternatives for consideration by the agency and City Council.

Program C1.2: The Centennial Hills Town Center area shall be regularly reviewed for all plans by all public agencies for rights-of-way, corridors, easements, substations, well locations, reservoirs and basins, and other utility infrastructure.

Objective D: Maintain the Centennial Hills Town Center Plan in coordination with the land use, circulation, and infrastructure plans of all adjoining jurisdictions.

Policy D1: Cooperate with other public agencies and jurisdictions to define planning and service opportunities to identify and resolve any conflicts along jurisdictional boundaries.

Policy D2: Develop and maintain a working relationship with adjacent public entities in order to coordinate the development of circulation systems, including the Beltway, trails, and urban streets.

Policy D3: Develop and maintain working relationships with adjacent public entities to ensure the coordination of compatible land use planning.

Policy D4: Establish a growth pattern which will result in a more efficient and equitable provision of infrastructure, public facilities, and services.

Program D4.1: Seek the elimination of irregular City boundaries and County “islands” which result in overlapping service areas and incompatible land use categories.

Program D4.2: Develop a method to assess the costs and benefits of annexation requests in terms of revenues, services, and facilities. Establish a fiscal impact review procedure to be utilized by all projects at plan preparation or zoning stages.

Program D4.3: Study a growth management program which integrates land development approval decisions and Centennial Hills Town Center Plan adherence and consistency requirements with adequate public facilities and service standards.

Objective E: Protect the health, safety, and general welfare of the businesses and residents in the Centennial Hills Town Center planning area.

Policy E1: Safe and adequate street width and unrestricted easement access for public safety vehicles, ambulances, utilities, and public sewerage shall be provided for all projects.

Policy E2: Schools should be located so that they are accessible to all residents and do not jeopardize the health, safety, or welfare of the residents.

Program E2.1: Where possible, orient and design schools so that school zones have the least impact on major and minor arterial streets.

Program E2.2: Within the Centennial Hills Town Center schools should not have direct access or egress to any major collector or arterial which could negatively impede traffic flow and street network function.

Policy E3: Park and school sites should be developed jointly whenever possible to ensure the best possible use of the site.

Policy E4: Developers shall dedicate land for use where a trail system is designated on the maps of the Recreational and Transportation Trails Elements of the Las Vegas 2020 Master Plan.

Program E4.1: Where possible, use existing and future utility corridors for extension of multi-purpose, non-motorized trail system.

Policy E5: Discourage development for locating beyond the design response time of existing fire stations unless the developer provides a site for a new fire station.

Program E5.1: Locate fire stations so that the minimum response time is achieved for all development.

Policy E6: Where possible, employ defensible space techniques in site design to minimize crime potential.

Policy E7: Where a homeowners association is not feasible an improvement district should be used to maintain landscaped areas and buffers.

4. CIRCULATION IN CENTENNIAL HILLS

4.1 BACKGROUND AND PURPOSE

The circulation system is the basic framework, in conjunction with land use, upon which the urban and regional form is shaped. Streets and highways not only move people and goods throughout the region but also affect the community's social and economic environments. The location and design of roadways, as well as multi-modal choices of transit (car, bus, monorail, trolley, train, bicycle, walking, equestrian), have significant consequences on land use patterns, air quality, plant and animal habitats, environmental noise, and community appearance. In addition, economic activities depend on the transportation system for the circulation of goods and people.

The purpose of the Centennial Hills Sector Plan Circulation Chapter is to provide for a comprehensive and coordinated circulation system to meet the various needs of residents, visitors and businesses in the Northwest. As a comprehensive system, it combines traffic circulation, mass transit, park and ride, bicycle, pedestrian, equestrian and air quality considerations into one integrated element. The element reflects the cooperative work with the Regional Transportation Commission and the other political entities to ensure continuity and efficiency of the circulation system as it crosses jurisdictional boundaries.



Transportation planning in the Las Vegas Valley involves federal, state, regional and local agencies. The agencies, which directly impact transportation planning in the City of Las Vegas are the following:

1. Regional Transportation Commission (RTC)
2. Nevada Department of Transportation (NDOT)
3. Federal Highway Administration (FHWA)

1. Regional Transportation Commission (RTC)

The purpose of the Regional Transportation Commission is to administer the funds generated by the motor vehicle fuel tax and revenues generated by bond issues and taxes, to improve the street and highway transportation facilities within Clark County.

As the region's Metropolitan Planning Organization (MPO) the RTC is responsible for the maintenance of a comprehensive, regional transportation plan. Also, in collaboration with the local participating jurisdictions, the RTC develops project priority lists for street and highway capital improvements and additions to the urban transportation system. The RTC also secures and administers planning grants for the participating local government entities while providing transportation services to the Las Vegas Valley.

2. Nevada Department of Transportation (NDOT)

The Nevada Department of Transportation is responsible for preserving and improving state and interstate highways. These include I-15, US 93, U.S. 95, and several major arterials which are within the City of Las Vegas planning area. The Approved Highway System Plan 1992 - 2001, prepared by NDOT, outlines the anticipated improvements to the State Highway system. This Plan encompasses new roadway construction and reconstruction, new interchanges and bridge construction/repair, safety improvement projects, and highway maintenance.

3. Federal Highway Administration (FHWA)

The Federal Highway Administration is the primary source of federal public transit capital and planning funding for Clark County. The RTC currently receives FHWA funding to accomplish transit planning. In the past, the RTC has also received federal capital funding to acquire buses used by the Las Vegas Transit System.

4.2 EXISTING CONDITIONS OF CENTENNIAL HILLS

4.2.1 Centennial Hills Transportation System.

The Las Vegas regional transportation system consists of both a roadway system and a transit system. The roadway system includes a network of major and minor arterial streets, collector streets, local streets, and free-ways. The transit system consists of the Citizens Area Transit (CAT) fixed route bus system (see Map 5, Centennial Hills Sector Transit Routes).

The major roadway network for Centennial Hills is shown on Map 6, Centennial Hills Sector Circulation. The thickest lines depict planned freeway and arterial segments to be added to the network or upgraded by 2015. The existing major roadways are generally oriented north to south and east to west. For the most part, major roadways are laid out on a one-mile grid (in the north/south and east/west directions, one mile separates each major street from the next). City and County codes generally require a 100-foot wide right-of-way for the major arterial streets located on the one-mile grid system to accommodate up to six through lanes of traffic.

Minor arterial streets, collector streets, and local streets tend to be very discontinuous throughout the Las Vegas Valley. However, they are generally laid out on a grid system, providing frequent interconnections with the major arterial streets. As a result, vehicle trips of any significant length almost always use the major arterial streets and freeways.

4.2.2 Centennial Hills Roadway System

Map 6 shows the freeway and major arterial street network serving the Northwest Region.

Freeways and Limited Access Roadways

US 95 is the sole freeway that serves the northwest region of the Las Vegas valley. From Downtown Las Vegas to the Summerlin Parkway, US 95 is a six lane controlled access freeway with service interchanges. From the Summerlin Parkway to Rancho Drive, US 95 is a four lane controlled access freeway with service interchanges at major arterials located at roughly one-mile spacing. US 95 provides access to I-15 and the Las Vegas Strip and to downtown Las Vegas via the "Spaghetti Bowl" Interchange.

Because it is a limited access freeway, US 95 is the preferred route between the Northwest Region and the Resort Corridor.

When finished the Beltway will be the newest limited access roadway to serve the Northwest, projected after the year 2003. This facility will enhance the options for access to the City and region.

Arterial Streets East-West

The following major and minor arterial streets presently extend east-west across most of the Northwest Planning Area.

- Gowan Road
- Alexander Road
- Ann Road
- Cheyenne Avenue
- Craig Road
- Lone Mountain Road
- Grand Teton Road
- Elkhorn Road

Cheyenne Avenue and Alexander Road are generally fully improved. The remaining major east-west arterials either have sections which are unimproved or have not yet been fully extended into developing areas. Major east-west arterials north of Cheyenne are being improved in conjunction with development.

Arterial Streets North-South

The following major and minor arterial streets presently extend north-south across most of the Northwest Planning Area.

- Tenaya Way
- Rancho Drive
- Buffalo Drive
- Durango/Rampart/Ft. Apache
- Jones Boulevard
- El Capitan Way
- Decatur Boulevard
- Rainbow Boulevard

Rancho Drive and Decatur Boulevard are the only north-south arterials in the Northwest planning area that are generally fully improved. Buffalo and Durango, north of Cheyenne, are still under construction.

MAP FIVE

City of Las Vegas

CENTENNIAL HILLS SECTOR

Transit Routes

Cat Bus Routes

-  101- Rainbow
-  102 - Jones
-  104 - Valley View/Torrey Pines
-  105 - Martin L. King/W. Desert Inn and Martin L. King/W. Desert Inn (Night)
-  106 - Rancho
-  211 - Smoke Ranch/Carey
-  218 - Cheyenne
-  405 - Northwest Circulator

Adopted December 18, 1996 Bill Number 96-109

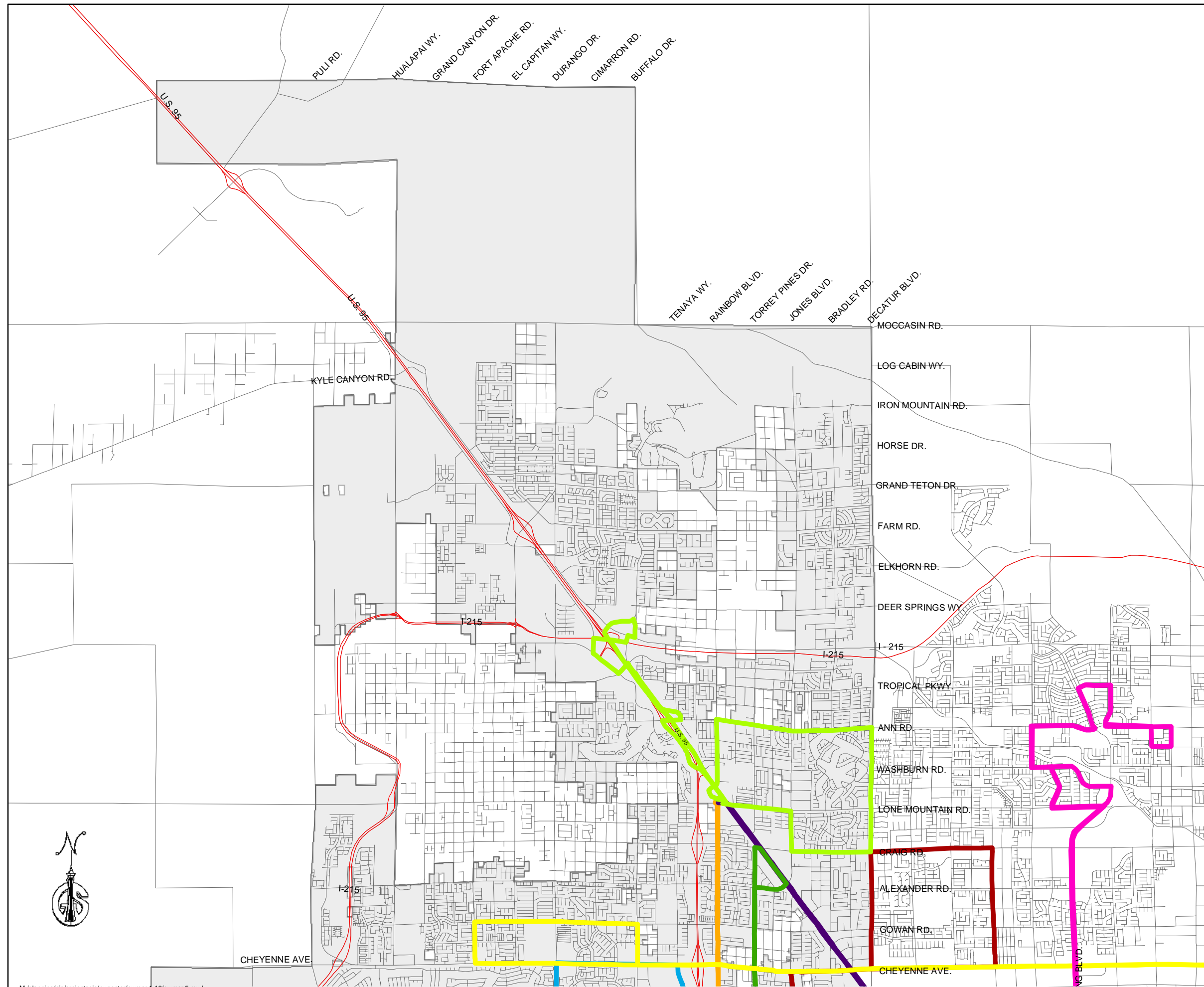
Revised May 24, 1999 GPA-01-99
Revised February 19, 2003 GPA-1392

Source: City of Las Vegas, Department of Comprehensive Planning

Plotted: February 19, 2004



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MAP SIX

City of Las Vegas

CENTENNIAL HILLS SECTOR

Circulation

Ultimate Public Use Corridors

-  Parkway Arterial (120 ft.)
-  Major Arterial (100 ft.)
-  Minor Collector (80 ft.)
-  Frontage Streets (70 ft.)
-  U.S. 95 Highway (400ft)
-  Beltway Alignment (350 ft.)
-  Town Center

Adopted December 18, 1996 Bill Number 96-109

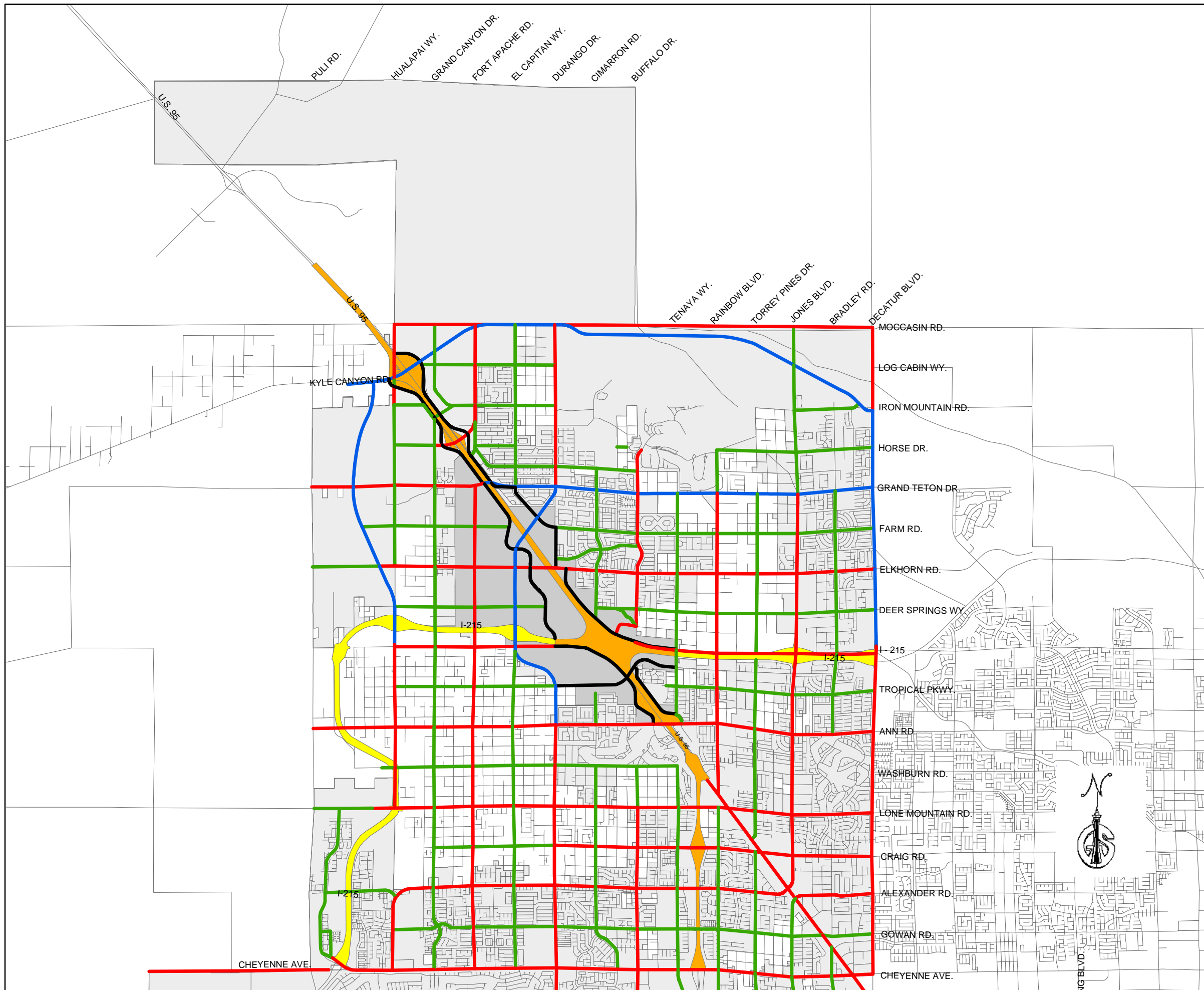
Revised May 24, 1999 GPA-01-99
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The remaining north-south major arterials have sections that are unimproved. In most cases, the unimproved sections correspond to undeveloped properties where development has not yet occurred even though much of the surrounding areas have been fully developed.

West of US 95, most north-south arterials, with the exception of Rampart, are interrupted by some form or another. The result of the street grid interruptions left by the “vacating” process, has left the Durango/Rampart/Fort Apache corridor as the only complete north/south thoroughfare in the west side of the Valley. Buffalo, Rainbow, El Capitan, Fort Apache, Hualapai, etc. have all been interrupted by developments, creating significant interruptions in the traffic flow system of the Northwest.

As a result of this interruption there is a critical need for two elements to occur.

1. The Durango-Rampart/Fort Apache corridor needs to be preserved at all costs, to allow an alternative route to the south side of the Valley.
2. Improvements to Jones Blvd. and Decatur Blvd. could also improve their characteristics as regional north/south routes.

None of the north-south arterials cross I-15 or provide any direct access to the Resort Corridor east of I-15. Rather, access to the Resort Corridor from the north/south arterials is via US 95 and the east-west arterials.

Current circulation patterns in the Northwest reflect the exploding population growth. Sawtooth streets, major thoroughfares which are still gravel roads, and two lane paved roadways where four or six lanes are needed to handle the increased traffic are all evidence of the impact of exploding growth.

A series of gravel roads in the Northwest study area have been designated for paving through the dust abatement program.

4.2.3 Existing Streets and Highways Definitions.

The street system in the Northwest is a traditional north/south/east/west grid pattern. Two limited access freeways traverse the grid; I-15 runs in a northeast to a southwest direction and US 95 extends south from its intersection with I-15 to Boulder Highway, and west to Rainbow Boulevard where it turns north to Rancho Drive. Arterials typically are at one-mile intervals and major collectors at half-mile intervals.

Functional Classification

Functional classification is the process that groups streets and highways into categories according to the type of service they provide. The intent is to channel trips through the roadway network in a logical and efficient manner. Functional classification defines the part that any particular road or street should play in serving the flow of trips through a roadway network. Typical functional classification categories are:

Interstate: A fully controlled access highway that is part of the interstate system. The purpose of these highways is to provide access to and through urban areas.

Freeway: A divided highway with 250-foot wide minimum right-of-way and classified as a “controlled access” highway. A Freeway is a high-speed road with grade-separated interchanges.

Expressway: A divided highway with a 150-foot wide minimum right-of-way and classified as a “limited access” highway. The Expressway is a high-speed road with at-grade, cross-traffic intersections.

Major Arterial: A street or highway which has a minimum right-of-way width of 100 feet and an existing or potential design capacity of two or more vehicle travel lanes in each direction, divided when possible.

Typically, Major Arterials have high traffic volumes, serving the longest urban trips, and providing access to major activity centers. Service to adjacent land is subordinate to the movement of traffic. Major Arterials are also known as primary thoroughfares.

Minor Arterial: A street or highway which has a minimum right-of-way width of 80 feet and an existing or potential design capacity of two travel lanes of traffic in each direction. More emphasis is placed on land access and providing service to trips of moderate length. Also known as a secondary thoroughfare.

Collector: A street with a minimum right-of-way width of 60 feet which connects arterials in a more or less direct line. They are streets which penetrate neighborhoods, collecting traffic from local streets, and channeling it to the thoroughfare system. The minor collector system primarily provides land access.

The highway network has two basic functions: to provide access to adjacent land uses, and to furnish mobility from origin to destination. There

is an inherent conflict with these two functions: mobility is served with higher speeds and uniform traffic flows, while land access is best served with slower speeds and inconsistent flows. The goal is an appropriate mix of roadway in an integrated network which optimizes mobility and access appropriate for the local land use.

To appropriately handle the travel demand associated with the various roadway functional classification categories, there are standard designs of each roadway functional classification. The City of Las Vegas roadway cross sections for arterial roadways, collector, and local streets are illustrated in the Uniform Standard Specifications of Public Works for the Construction of Offsite Improvements as adopted by the City and maintained by the Department of Public Works.

Rural Streets

There are proposed rural street standards that have different improvement standards but the same overall right-of-way widths. (See the Rural Street Standards in the Goals, Objectives and Policies). The exact specifications for rural streets will be adopted by separate instrument.

Rights-of-Way

The right-of-way is the total width of the lineal segment of land required for the road paving and for placement of future utilities and structure (gas, water, sewer, telephone, and electric facilities). The right-of-way may include landscaping, sidewalks, and curb and gutter. The subdivision and site plan approval process provides for the dedication of rights-of-way for all street system improvements by property owners. The property owner is responsible for "half-street improvements of master planned, arterial streets that are located immediately adjacent to new subdivisions. This includes the construction of travel lanes and over paving, parking lanes, sidewalks, curbs, gutters, landscaping and streetlights. Also, developers are required to construct, at minimum, 24 foot, two-way paved roadways to link their subdivisions to existing roadways if linkage is not already available.

Public Use Corridors

In 1997, the Master Plan of Streets and Highways was amended to add a new designation for public street corridors which shows a "public-use corridor" width comprised of a certain width of public street right-of-way and a certain width of public-use easements on one or both sides of the public right-of-way. The public-use easement area shall be granted and available for any future public need in conjunction with but not limited to traffic, drainage, and storm sewers,

street-lighting, fire hydrants, multi-use trails, walkways, and sanitary sewer purposes. The total width of the road is the sum of the right-of-way and the roadway easements on both sides of the public corridor. Development sites abutting designated public street corridors which do not have provisions for a Homeowners Association shall dedicate the public street corridor entirely as public street right-of-way. The public multi-use trail system and required landscaping areas may be in addition to any right-of-way or public use corridors required by the City.

The principle purpose of this classification is to enable the City to increase capacity on streets where such capacity is not expected to be needed in the short or mid-term future. This classification is not considered appropriate for general use, but only for specific areas which have been designated in the amendment MSH-1-97 of the Master Plan of Streets and Highways.

4.3 Circulation Issues in Centennial Hills

4.3.1 Linking Transit to Affordable Housing.

The interim report of the Transit Technical Study found that transit service is most widely utilized by persons in the lower median income brackets as well as the elderly and those who do not own a vehicle. These groups typically are also in need of affordable housing and therefore it is important that areas planned for affordable housing projects are linked to the transit service areas.

4.3.2 Bicycle Route System.

The adoption of the City of Las Vegas Transportation and Recreational Trails Elements of the 2020 Master Plan is the first step in developing a comprehensive network of bicycle routes for both the commuter and recreational bicyclist. Commitment to a program of annual capital expenditure for the staged implementation of a City-wide bicycle route system is essential to the success of the Trails Elements. Also, regional coordination is essential to the development of a bicycle system which links all areas of the Las Vegas Valley.

4.3.3 Pedestrian Circulation.

This is an important component of the Circulation chapter, but transportation planning often ignores pedestrian considerations. Walking was at one time essential to most social and economic activities and the urban envi-

MAP SEVEN











City of Las Vegas

CENTENNIAL HILLS SECTOR

Trails

Existing and Proposed Areas

Map No. 2 From The
Joint Parks and Trails Plan
Interlocal Agreement

-  Joint Land Use Boundary
-  Trail Crossings
-  Multi-use Equestrian Trails
-  Multi-use Non-Equestrian Trails
-  Equestrian Trails
-  Proposed
-  Removed
-  Unincorporated Clark County
-  City of Las Vegas
-  North Las Vegas

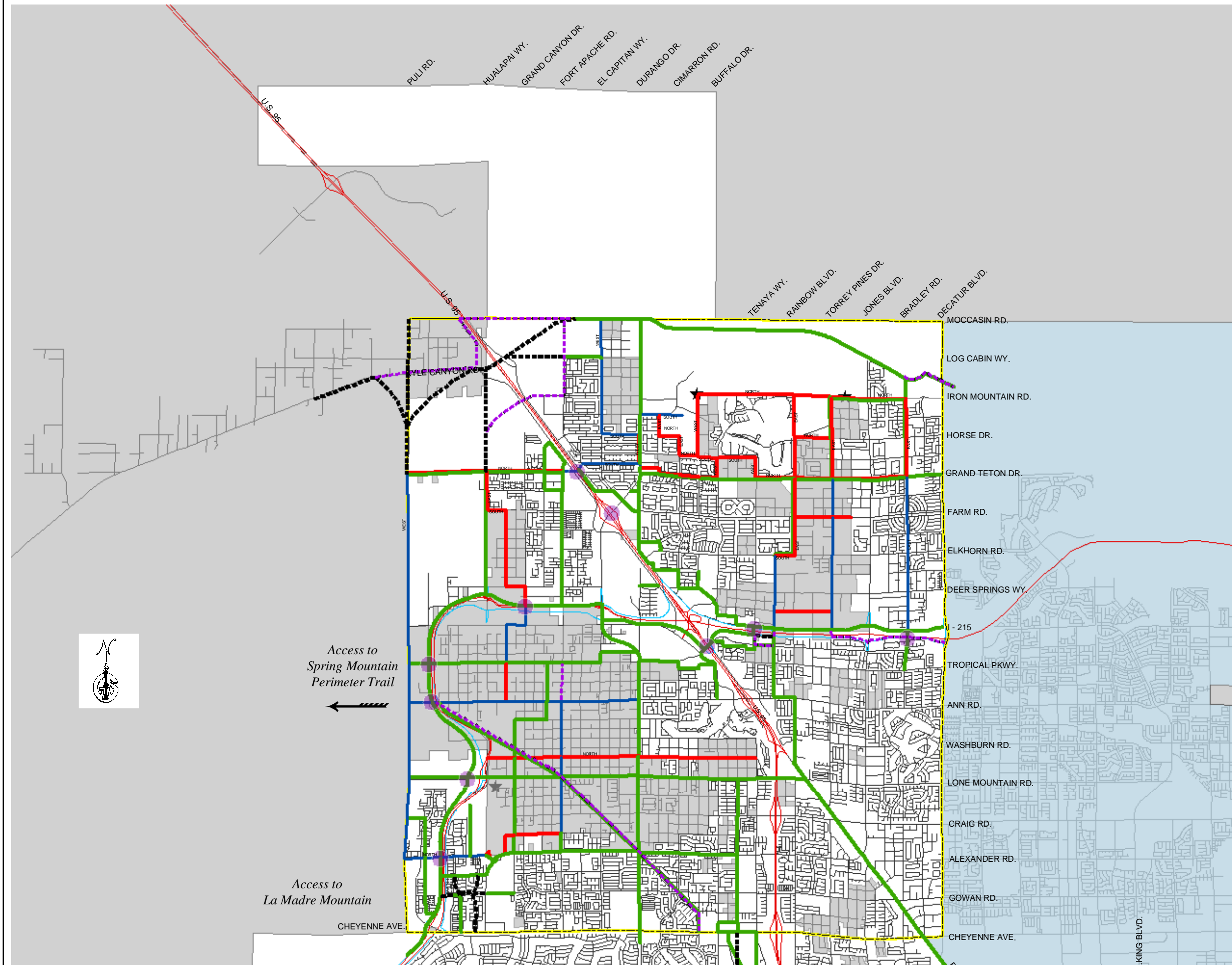
Per Interlocal Agreement on January 2, 2002
Adopted by the City of Las Vegas on November 20, 2002
Adopted by Clark County on May 20, 2003
Amended by the City of Las Vegas on May 21, 2003 per GPA-1983



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Plotted: February 2, 2004



ronment within cities reflected facilities scaled to pedestrians. Increasing use of the automobile, however, changed the original street systems. They now serve a much larger population and a very dissimilar range and distribution of land uses. This, and the space devoted to the automobile, has forced the pedestrian into unbalanced competition for available circulation space. The automobile made pedestrian activity obsolete in low density environments. However, pedestrian travel is still important in these areas, particularly for children going to school, the Town Center mixed use districts, and for all citizens going to recreation facilities. In urbanized areas and major activity centers, pedestrian traffic is also important because of its unique combination of capacity, accessibility, and flexibility. Reflecting these issues, there are pedestrian-oriented street standards for the Town Center area that have different cross sections from other typical urban streets. These standards were adopted as the Town Center Development Standards, an addendum of the Zoning Code.

4.3.4 Multi-Use Trail System.

A multi-use, non-motorized trails system (bicycle, pedestrian and equestrian trails) is another important element of a successful multi-modal circulation system. Such a multi-use trail system may temporarily utilize unimproved rights-of-way where separate easements are not available to connect other existing trails systems and selected recreational facilities. The Beltway may provide trail development opportunities throughout the Northwest Plan area. The locations of the proposed and existing trails are depicted on the Centennial Hills Existing and Proposed Trail Alignments Map (Map 7).

A comprehensive discussion of trails has been adopted as elements of the Las Vegas 2020 Master Plan as the Transportation and Recreational Trails Elements.

4.3.5 Air Quality.

Gasoline powered vehicles are responsible for approximately 96 percent of the carbon monoxide in the Valley, which reaches unhealthy levels many times during the winter season due to temperature inversions. The Clean Air Act Amendments of 1990 require all transportation plans and programs be evaluated for their carbon monoxide in the Valley. Two of the programs developed to address this issue are the U.S. 95 and I-15 Major Investment Studies of the Regional Transportation Commission. The purpose of these studies is to create policy that will reduce air pollution and traffic congestion through roadway system and demand management improvements.

4.4 GOAL, OBJECTIVES, POLICIES AND PROGRAMS FOR CIRCULATION IN CENTENNIAL HILLS

GOAL: Develop a comprehensive circulation system serving local as well as regional needs for existing and future developments in the Northwest.

Objective A: Develop and maintain a balance between the circulation system and land use development.

Policy A1: Evaluate the roadway systems near all proposed developments for capacity and safety, and determine coordinated improvements needed to support the additional traffic generated.

Program A1.1: As part of the development review process, a Traffic Impact Analysis (TIA) for all development projects that generate more than 100 vehicle trips during peak hour traffic and others as needed, will be submitted prior to application approval.

Program A1.2: Evaluate the integration of transportation management opportunities into the development review process.

Policy A2: Continue to require of property owners, all right-of-way and frontage improvements that are necessary to handle traffic generated by the development and surrounding properties and necessary to implement the goals and objectives of the General Plan.

Policy A3: Plan for the extension and expansion of the City circulation systems to complement the Circulation goal and objectives of the General Plan and the goals of the U.S. 95 and I-15 Major Investment Studies.

Program A3.1: Insert the technically preferred Beltway alignment in the Master Plan Streets and Highway Map.

Program A3.2: Institute an annual review and update of the Master Plan of Streets and Highways to include all Council actions, and to evaluate and maintain corridor continuity. Propose the addition of selected corridors on this map.

Program A3.3: Revise the City Subdivision Ordinance to allow for flexibility in street improvement requirements that would complement rural development.

Program A3.4: Initiate a circulation study of the Centennial Hills Sector to evaluate circulation alternatives for rural development that recognizes the Rural Neighborhood Preservation (RNP) area, Town Center, and the Village Center land uses.

Program A3.5: The City shall promote an active policy of consolidation of driveways, access points, and curb cuts along existing developed arterials, or when development or change in intensity of development or land use occurs, or when traffic operation or safety warrant such a consolidation.

Program A3.6: Design residential subdivisions to encourage access from collector streets and to discourage use of local streets as a bypass to connector arterials.

Program A3.7: When arterials are required, residential development shall be oriented away (side-on or rear-on) from such streets, and properly buffered so that the traffic-carrying capacity on the street will be preserved; and the residential environment protected from the adverse characteristics of the streets.

Program A3.8: Due to the traffic congestion caused by numerous points of ingress and egress along commercial streets, future commercial developments or modifications to existing development shall be master planned with limited points of ingress and egress onto a major street.

Policy A4: The following minimal Rural Street Standards will support development within the Desert Rural (DR) and Rural Neighborhood Preservation (RNP) areas by utilizing rural street design and providing access to multi-purpose trails, open space, and recreational areas. The standards are to encourage innovative design in rural development street design.

Program A4.1: The City of Las Vegas will maintain full control over designated right-of-ways where roadways are developed to the standards for rural streets. This protects the integrity of the

transportation infrastructure in the event that future changes to land use affect travel patterns and demand, requiring the need to utilize the full right-of way.

Program A4.2: No right-of-way will be relinquished when a roadway is to be developed to rural street standards.

Program A4.3: The City reserves the right to abandon the Rural Streets Standards concept and revert to the existing traditional street improvements if traffic volumes or safety becomes a prevalent issue. Infrastructure (conduit and bases) for street lighting shall be constructed in all public rights-of-way throughout the DR and RNP areas.

Program A4.4: Streets under consideration for the development of rural street standards must meet the following criteria:

- a) Be within the Desert Rural and RNP areas as delineated in the Centennial Hills Sector Plan of the General Plan or be adjacent to land uses with densities less than 2.00 dwelling units per gross acre.
- b) Be available the full length of any intended rural street section and be of an acceptable length (typically from an intersection to an intersection).
- c) Function as a local access or collector street.
- d) Subdivisions may be allowed to install rural street improvements around the perimeter of their sites after appropriate review by the City of Las Vegas.

Objective B: Plan, develop and operate a safe and efficient roadway system at a level of service acceptable to the citizens of the City.

Policy B1: Continue to evaluate priorities for traffic control and other street and highway improvements through the analysis of current traffic operations data.

Program B1.1: Conduct annual or additional reviews on an as needed basis of warrants for traffic control devices, updating as appropriate, after review of operational and safety records.

Program B1.2: Continue to work with NDOT and the RTC and utilize the TRANPLAN demand model, or other acceptable model, to assist in future circulation decisions.

Program B1.3: Develop a Transportation Criteria Manual to include such items as, but not limited to: street design standards, parking lot standards, and traffic impact analysis criteria, which will aid in the proper planning, design, and coordination of all circulation facilities.

Policy B2: Utilize system management techniques to achieve maximum efficiency and safety of the existing roadway system.

Program B2.1: Continue to implement the provision of left turn signals and left turn lanes at congested intersections as well as protected/permissive left turn signals at certain intersections.

Program B2.2: Complete the upgrade of the computerized, coordinated traffic signal system.

Program B2.4: Parking along all major and minor arterial roads should be prohibited.

Program B2.5: Residential driveway access should be prohibited along all arterial routes.

Policy B3: Seek opportunities that facilitate the safe movement of trucks.

Program B3.1: Continue to evaluate the network of streets and highways to determine which streets are most appropriate for truck operations.

Program B3.2: Install and enforce truck route directional signs on preferred truck routes.

Objective C: Develop and promote a multi-modal circulation system.

Policy C1: Support expansion of transit service to serve all areas of the City, particularly those areas that have transit dependent populations.

Policy C2: Support the implementation of traffic design features (e.g. exclusive bus lanes, bus turnouts, transit loading/unloading areas) which will improve the operation of transit vehicles on new roadways and roadways scheduled for improvement.

Policy C3: Continue to provide a system of designated bicycle routes and facilities, including storage considerations that provide a convenient and safe alternative to the automobile.

Program C3.1: In cooperation with the RTC, organize, develop and maintain a bicycle path network. Meet with all adjacent government entities to create a metropolitan bicycle network. Such network program information shall be made available to developers, citizens, and entities.

Program C3.2: Encourage a biennial review of the Trails Element with the RTC.

Program C3.3: Continue to budget for the installation of bicycle racks at public facilities.

Program C3.4: Consider zoning ordinances to add requirements for provision of bicycle storage facilities in all new, multi-family, and commercial developments.

Policy C4: Require the provision of pedestrian facilities that complement the City roadway system, particularly in areas with access to schools and areas of intense pedestrian activity.

Policy C5: Provide non-motorized, multi-use trails for horseback riding, bicycling, hiking and jogging within and/or between certain designated areas to provide alternative circulation and recreational opportunities.

Program C5.1: Implement the Recreation and Transportation Trails Elements of the Las Vegas 2020 Master Plan.

Objective D: Coordinate with other governmental entities to ensure the efficient development of a regional transportation system.

Policy D1: Require all privately and publicly sponsored circulation improvements to be in conformance with local and regional circulation plans of the RTC and the other governmental entities, including NDOT, to ensure the continuity and consistency of the street and highway system.

Policy D2: Coordinate with the Regional Transportation Commission in the development of an intermodal (highways, transit, trails, terminal facilities, and new technologies) circulation system.

Policy D3: Coordinate with Clark County regarding the Nuclear Waste Repository Program as it affects transportation through the Northwest.

Policy D4: Attempt to coordinate with the Clark County School District to provide for the safe walking and transportation of students who walk or ride to school.

Program D4.1: Support the suggested Safe Route to School Program.

Program D4.2: Support a standard policy that outlines the regulations for installation of speed limit flashers and school speed zones.

Program D4.3: Coordinate reviews of Clark County School District site to reduce and possibly eliminate the location of elementary and junior high schools along major and minor arterials.

Objective E: Develop a circulation plan that supports improvements and programs to enhance air quality in the Northwest.

Policy E1: Utilize system management techniques to aid in the improvement of roadway levels of service, particularly during peak hours, to aid in the reduction of air pollution.

Policy E2: Promote the reduction of the single-occupant vehicle on area roadways.

Policy E3: Establish the Park and Ride Program as a developer incentive to begin the van pool/car pool/bus pool alternatives throughout the City.

Program E3.1: Work with the RTC in developing and promoting transportation system and demand management techniques for area employers and developers. Such programs shall include, but not limited to ride sharing, parking management, park and ride lots, and bus turn out lanes.

Program E3.2: Support the development of a Share-A-Ride program for employees and assist in improvement of the program.

Objective F: Provide for the development and maintenance of the Northwest's transportation infrastructure including streets, sewer, water and storm drain pipelines, electrical and communication facilities.

Policy F1: The maintenance of the investment in the existing and future infrastructure is of highest priority for the community.

Policy F2: The City shall maintain a high level of intergovernmental coordination and citizen participation in the circulation and transportation planning process and work with other agencies to assure that regional transportation plans are consistent with the City's General Plan.

Policy F3: The City of Las Vegas hereby incorporates the master plans for sewers, water storm drainage, and electrical service as part of the Centennial Hills Sector Plan Circulation chapter. As utilities may promulgate or revise their master plans, they shall consult the City and be subject of its review and approval process.

Policy F4: When prepared, the City of Las Vegas shall incorporate the Short Range Transit Plan, prepared and maintained by the Regional Transportation Commission, as part of the Centennial Hills Sector Plan Circulation chapter.

Objective G: Integrate Northwest planning with Beltway planning and design. Coordinate activities with the County to insure Parkway standards throughout the Northwest.

Policy G1: The Beltway shall be at a depressed grade whenever practical and/or feasible throughout the Northwest Planning Area.

Policy G2: The Beltway right-of-way shall contain space for the location and development of a continuous, non-motorized, multiple-use trail system designed and built in conformance with the Trails Element of the Las Vegas 2020 Master Plan.

Policy G3: Recreation and open space plans shall incorporate Beltway right-of-way or secure adjacent lands for non-motorized uses and provide access to other recreational and open space opportunities.

Policy G4: Allow the mining of materials within the Beltway Rights-of-Way to allow for economic incentives and to pay for depressing the Beltway.

Policy G5: Establish, with County cooperation, landscape standards for the Beltway Design criteria.

Policy G6: The beltway overpasses at Alexander and Bradley shall be designed to accommodate equestrian users.

Policy G.7: Develop bonus incentives for the development of multi-purpose trails within and/or part of development projects.

5 RECREATION AND OPENSOURCE

5.1 BACKGROUND

Open space, through multi-use trails and recreational uses, needs to be created and maintained. The residents of the area selected this as their number one priority. Many areas of Centennial Hills were developed for a rural lifestyle that remains intact today. Creeping urbanization threatens to encompass the rural areas and cut off their access to open space. The loss of open desert is devastating to equestrian-oriented neighborhoods. A multi-use trails system will help reestablish this rural lifestyle, as well as reserve rural areas that do still exist. It also will allow the open desert areas that are privately owned to be developed in a comparable density.

A rapidly growing urban area also creates growing demands for recreational facilities. It becomes more and more important to furnish facilities and access to them. Access to the park or recreational facility should not be based solely on the ability to drive an automobile. In a City facing automobile congestion problems, destinations that can be reached by pedestrian, bicycle, or equestrian travel help alleviate some of the stress on our transportation system as well as provide a form of recreation in itself. Also by locating the open space closer to the developing areas the need for access becomes less of a strain on the roadway network.



Recreational opportunities associated with schools need to be increased. A school facility with outdoor space, equipment, as well as a gymnasium provides opportunities for a variety of recreational needs. The campuses also provide open space to organize programs for all family members.

Meeting the varied leisure needs of adults and children requires facilities and space planning. Recreation needs include track break program facilities, adult education, regional soccer, leisure service centers (with pool, gym, kitchen, classrooms, theater, tennis, skating, etc.), neighborhood and regional parks, and a green-way system. Developing these facilities requires planning and funding for land and buildings. A variety of agencies and opportunities exist which provide open space. These include the Bureau of Land Management, Clark County, Clark County School District, Flood Control District, Regional Transportation Commission, and City Council mandated zoning conditions of approval. Program goals for the City, agencies, and developers need to be clarified and aligned when possible to provide for open space and leisure needs for the citizens of the Centennial Hills area.

5.2 Open Space Issues

The Open Space chapter of the Centennial Hills Sector Plan identifies needs and locations of various types of recreational facilities, acquisition opportunities, and connections to land uses. Open spaces need to be coordinated with larger community goals. Issues include:

1. Providing, maintaining and linking non-motorized, multiple use trails. See the Recreational and Transportation Trails elements of the 2020 Master Plan.
2. Park standards detailed in the Parks Element of the Las Vegas 2020 Master Plan to meet the needs of the population.
3. Acquiring land for neighborhood, district, urban, and regional parks.
4. Developing facilities that can be jointly used to serve the population.
5. Continued coordination among agencies that provide recreation, circulation, land and facilities.
6. Recognize that open space is a regional issue requiring a balanced commitment to developing and maintaining facilities serving user groups and public and private space providers.

7. Incorporation of open space into development plans and design.
Encourage more master planned developments that include localized open spaces.
8. The lack of facilities in the Centennial Hills area is a function of the developing nature of the area. Required facilities are:
 - a) Track break facilities
 - b) Adult education centers
 - c) Regional soccer fields
 - d) Leisure Service Centers
 - e) Equestrian facilities
 - f) A recreation center for the Centennial Hills Town Center
9. Create additional neighborhood parks and recreation facilities with the assistance of developers through the use of residential park impact fees currently in place.



5.3 GOALS, OBJECTIVES, POLICIES AND PROGRAMS FOR RECREATION AND OPEN SPACE IN CENTENNIAL HILLS

GOAL: Provide comprehensive, efficient and cost-effective community facilities and services.

Objective A: Continue to provide an adequate and diverse system of parks, open space, recreational facilities and services at the local, district, and regional levels.

Policy A1: Coordinate planning, including determination of appropriate locations, size, and type of facilities for municipal parks, open space, and other recreational operations.

Program A1.1: Develop an open space plan for the Centennial Hills area which shall coordinate park program needs, park development needs, and improvements with the City's Recreation Advisory Board.

Program A1.2: Continue the cooperative arrangement with the Clark County School District to provide joint neighborhood park and school sites.

Program A1.3: Continue to coordinate plans with federal, state, and county agencies to secure access and use of public lands that are suitable for recreation and public purpose development, especially in the northwest portion of the Valley.

Program A1.4: Continue to explore and develop opportunities for public/private financing or service provisions in the operation of public parks and recreational facilities.

Policy A2: Where possible, continue to develop the multi-use trail and bike path systems according to the Trails Elements of the Las Vegas 2020 Master Plan and in cooperation with other agencies.

Program A2.1: Continue participation on the Regional Transportation Commission Regional Trails Subcommittee.

Program A2.2: Use the Subcommittee and trails inventory to assure access through trails paths and staging areas for all non-motorized trail users. Also develop an area where motorized trail users can gain access to areas for their vehicles.

Program A2.3: Maintain and use the RTC Corridor inventory to develop trail/path opportunities.

Program A2.4: Continue to implement the Recreational Trails Element of the Las Vegas 2020 Master Plan to link existing areas with the Floyd Lamb State Park, BLM lands, and Red Rock Conservation Area.

Program A2.5: Coordinate the implementation of the Recreational Trails Element of the Planning and Development Department with the Department of Leisure Activities Master Plan and its updates.

Policy A3: Where possible, develop links among trails, paths, public facilities, and public lands for alternate means of circulation and recreation.

Policy A4: Utilize a portion of the proposed Beltway Corridor as a means to develop a continuous, non-motorized, multi-use trails/path system along with Clark County and the City of North Las Vegas, and the establishment of a green-way system along the Beltway.

Objective B: Provide efficient management of park and leisure facilities through the implementation of the Parks Element of the Las Vegas 2020 Master Plan.

Policy B1: Establish priorities in the development of existing parks which provide maximum benefit to the public.

Program B1.1: Provide regular, formal program priorities input to the City's Recreation Advisory Board.

Program B1.2: Establish a list of priorities for the park facility and recreational program improvements.

Program B1.3: Continue to coordinate and review plans for development of park facilities and recreational program improvements with the City's Recreation Advisory Board.

Objective C: Incorporate private development into open space and leisure planning.

Policy C1: Cooperate with private developers to ensure that adequate park space, open space system, trail system, and recreation facilities are provided to meet the needs of new residents.

Program C1.1: Evaluate and monitor new development and zoning regulations to ensure any required provision of open space.

Program C1.2: Encourage land dedication or designation and construction of parks and recreational facilities which are coordinated with public open space and recreation needs.

Policy C2: An open space requirement which supports the standards as established within Title 19A.

Policy C3: Solicit proposals to operate and manage equestrian centers along the Western foothills area, allowing private enterprise to establish the facilities for public use.

Objective D: Develop streetscape standards for the rural and urbanizing areas of the Centennial Hills Sector.

Policy D1: Cooperate with private developers to allow streetscapes in the new and existing developments.

Policy D2: With the cooperation and assistance of the Las Vegas Valley Water District, establish limited retrofit programs for streetscapes where none currently exist.

Objective E: Develop plans for the Lone Mountain Look Out Park facility and continue to link Lone Mountain to the greenway system established along with the Beltway and trail system.

6. INFRASTRUCTURE OF CENTENNIAL HILLS

6.1 INTRODUCTION

The infrastructure of the Centennial Hills area is comprised of four major components. They include:

- Sewer Collection and Treatment System
- Water Distribution System
- Flood Control System
- Solid Waste

Infrastructure is the aggregate of the sewer, water, flood control and solid waste facilities that allow the Northwest to grow.

Typically, infrastructure and facilities, like government itself, are responsive to social objectives. These objectives include health, safety, welfare, economic development, employment and recreation. The connection between land use designations and these facilities is important and subtle. Proper infrastructure planning allows for greater population densities and more economical development. Conversely, a large infrastructure commitment can lead to justification for approving greater land use densities.

Land development requires water, sewer, trash disposal, drainage and roads. These facilities enable the buildings to be built, accessed, and safely used. Project development involves a variety of technical, fiscal, legal, environmental and political issues.



The City traditionally provides infrastructure. Las Vegas does not provide its own water and solid waste services. The Las Vegas Valley Water District provides water to the residents of the City. A private corporation, Republic Services, provides solid waste disposal. Otherwise, the City provides for the health, safety and welfare of its citizens directly by providing wastewater collection and treatment and the use of washes and construction of channels for flood control. Local road improvements and flood control are coordinated through funding arrangements with the Regional Transportation Commission and the Clark County Regional Flood Control District. The City provides for infrastructure planning and construction in concert with other providers. These planning and construction activities are affected by market demands, local and regional land use plans, and population estimates.

Once built, the government usually maintains infrastructure facilities. The long-term costs of these facilities on the City shows up in annual budget allocations to build, rebuild and maintain them. Operation and maintenance costs are as important as capital construction costs in evaluating the ability of the City to provide infrastructure to support its growth and development.

6.2 SEWER COLLECTION AND TREATMENT SYSTEM

There are two types of sewers in the City: sanitary and storm sewers. Sanitary sewers carry away the wastewater from residential and institutional uses, frequently combined with industrial effluent. Storm sewers carry the rainwater collected from roofs, roads, and other impervious surfaces.

There are public and individual benefits which accrue from centralized wastewater collection and treatment systems. They include:

1. Improved health by minimizing exposure to waste-born diseases.
2. Improved standards of living by making housing more affordable for everyone by reducing lot size and location requirements for wastewater treatment. Septic systems require one-quarter acre minimum lot, with public water, to effectively treat sewage from a house.

3. Promoting quality of life by eliminating the odor and insects associated with wastewater disposal. The history of the sewer system is fully discussed in the City of Las Vegas General Plan "Infrastructure" element.

Sewer (and water) service provision has evolved from building a system capable of meeting projected populations in agreed upon areas, to a perspective of monitoring and analyzing the system for its relationship to direction of growth, design criteria and the financing of the utility. Second, that the system capacity appears to be based upon overall projections far greater than actual growth figures.

The intent of this last statement is not to say that the City has built an excessive treatment and collection system. The City must also accept all sewage flows from North Las Vegas. The City also develops projections for specific land areas and projects and may enter into oversizing agreements with developers to prepare for possible future growth in such areas.

The treatment capacity for the City appears to be far beyond its own expected flows. However, the City also provides sewage treatment for North Las Vegas. Collection is expected to keep pace with the population of the City. This is primarily because the majority of the collection system is constructed at the expense of the developer as sites are developed. Map 8, Centennial Hills Sector Existing and Proposed Sewer Lines, shows the main sewer lines serving areas of development approved by the City.

The Public Works Department extends the collection system to meet the needs of new customers by oversizing and extension policies. The construction is funded through the City's Capital Improvement Program (CIP).

6.2.1 SEWER SYSTEM ISSUES

The City of Las Vegas sanitary sewer plans are fundamental to the operation of a sound system for the collection and treatment of wastewater. However, these operations should be reviewed in the context of City resources of land, water, roads, and air. These City resources are assets that benefit Las Vegas and its citizens and contribute to the growth of the entire valley. Sewer issues for this Centennial Hills Plan include the following items.

6.2.2 City Provided Sewer and Annexation.

Plant and pipe capacities are based upon factors which include probable land use densities. Land use designations indicate an expected maximum density or dwelling units per gross acre, but are always subject to revision. Collection and treatment systems are sized according to such present day information. These are adjusted as the market causes changes to the land use plans.

In order to develop at densities greater than two dwelling units to the acre, developers are required to connect to a sewage system. Clark County does not provide any sewage collection and treatment service to the Northwest Plan area. Therefore, any development in the County "islands" of the Northwest at a density greater than two per acre will require annexation to the City. Many of these "island" areas are in the Desert Rural (DR) area. In order for those areas to develop sewage collection lines of larger capacity than needed to serve a Rural Neighborhood Preservation (RNP) area must traverse this low density area. The document "Public Works 2000," written by the City of Las Vegas Department of Public Works, established the policy regarding sewer line over sizing and extensions.

The over sizing policy allows the City to pay for the added portion of a collection system that is beyond the needs of an individual development. A similar policy allows a development to recover a portion of its original investment in collection system extensions from others tapping onto the extension. These methods of system expansion are driven by the real estate market while conforming to local master land use plans. Such methods provide a cost-effective means for infrastructure expansion.

The added costs of over sizing are viewed as a cost against which a return is expected. Each unit of the development pays a sewer connection fee and is placed on sewer service. That return comes in the form of developer requests to increase land use densities in the service area of the larger lines because collection capacity exists.

The issue here is to assure that adequate facility capacity is available to support development within a designated area. The General Plan for the City specifies the location of expected growth. Facilities, such as sewer lines, are sized to handle that growth. If a project with a use intensity greater than designated by the City is submitted for review, it should be analyzed in light of its effects on the capacity of facilities to absorb that growth. Developers pay 100% for collection system extensions. The over sizing portion is reimbursed upon acceptance of the construction. Over-sizing criteria is based on year 2040 flow projections of the Wastewater Collection System Master Plan. A ten year reimbursable account is created for the base design cost (development needs). If development does not occur, connection fees may not ever materialize for the base design cost.

6.2.3 Levels of Sewer Service and Land Use Planning.

A single family dwelling may be estimated to generate 250 gallons of sewage per day. An advantage of such a figure is that the effect of a development on the capacity of existing pipes and plants can be measured in quantitative terms. Collection lines, lift stations, and treatment plants can be measured in quantitative terms and checked to see if there is enough design capacity to absorb the added flow. By the same token, proposed developments and approved land uses can be quantified to provide an estimate for future designs and possibly their timing and funding. The assumption here is that a land use plan, once adopted, will be enforced. If changes to the Plan are necessary, they will be made based upon considerations including the effects on traffic, pollution, water requirements, manage solid waste disposal, parks, public finances, and the political impact of change.

6.2.4 Capital Improvement Planning.



The City has a Capital Improvement Plan for its infrastructure. This five year plan is reviewed and updated annually by the City Council. This allows for changes in revenue and expenditure patterns and changes in priorities. The Capital Improvement Plan process provides order and continuity to the repair, replacement, construction, or expansion of the City's capital assets. The City defines capital expenditures as:

MAP EIGHT

City of Las Vegas

CENTENNIAL HILLS SECTOR

Existing & Proposed Sewer Lines

-  Existing Sewer Lines (greater than 12" diameter)
-  Proposed Sewer Lines

Adopted December 18, 1996 Bill Number 96-109

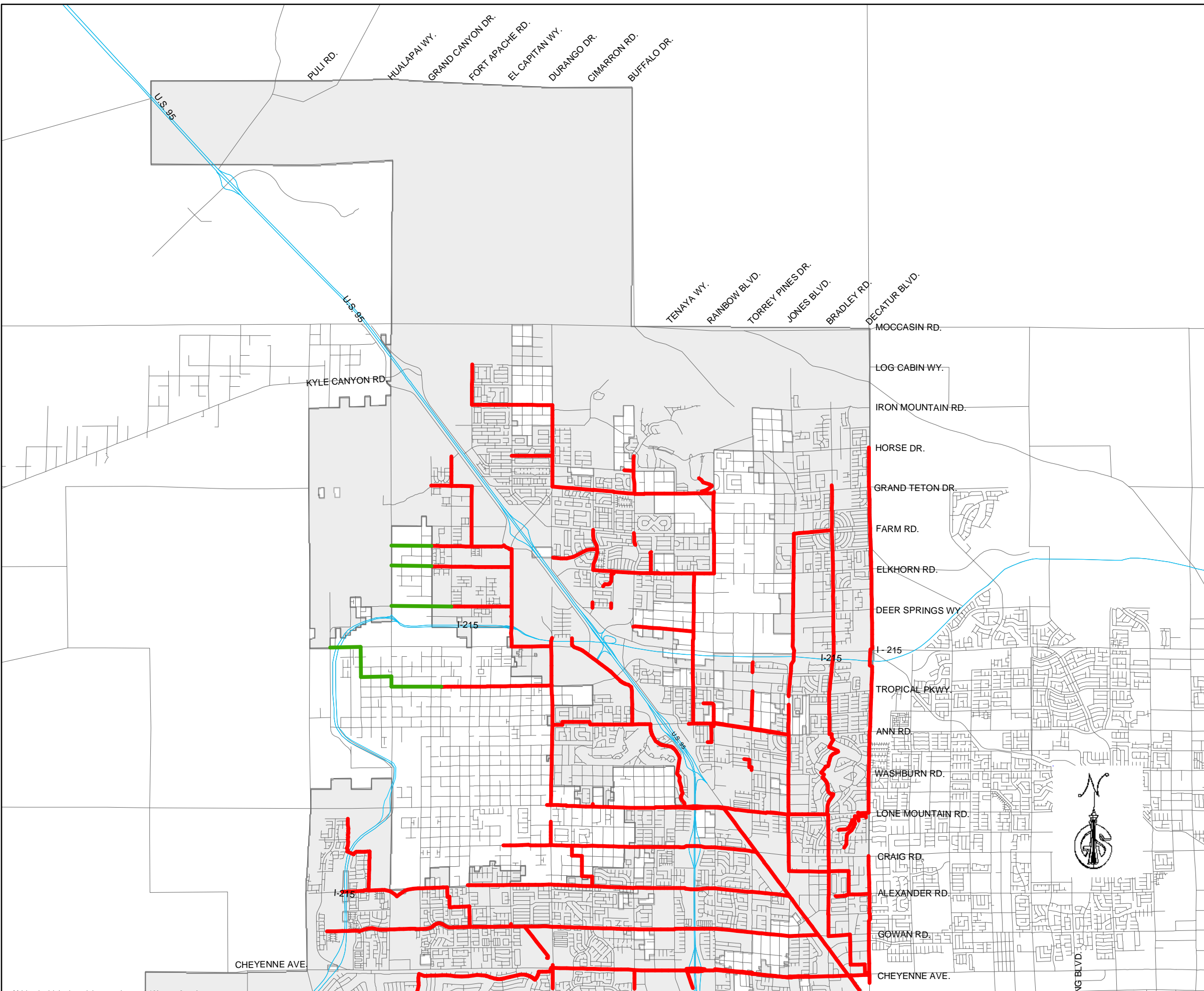
Revised May 24, 1999 GPA-01-99
Revised February 19, 2003 GPA-1392

Source: City of Las Vegas, Department of Public Works

Plotted: February 19, 2004



GIS maps are normally produced only to meet the needs of the City. Due to continuous development activity this map is for reference only.
Geographic Information System
Planning & Development Dept.
702-229-6301



“any undertaking or any physical improvement to land, provided the title will rest with the City of Las Vegas and the project has an estimated useful life in excess of five years and estimated cost in excess of \$20,000.”

These expenditures compete for a finite supply of funds. Other funding requirements of the City include operations, maintenance, personnel and contracted services. Therefore, capital improvement decisions affect the availability (timing and dollars) of monies to support growth. Again, these are related to the land uses of the approved General Plan.

The Capital Improvement Plan includes undertakings to construct, renovate and improve necessary infrastructure. An interpretation of that phrase is a prioritization of construction of new facilities to support growth, reduce existing deficiencies, or remain abreast of replacement requirements. The competition for fiscal resources requires a coordinated inventory of information about existing development, approved development (developing and unbuilt), and approved land uses in order to ascertain whether the City can fund or require funding of Capital expenditures that should be analyzed by budget item categories such as “new growth” or “rehabilitation”. These categories can allow the City to regularly and promptly review the allocation of monies by category and by geographical area. A further comparison can then be made between costs required to support these categories and their relationship to approved land use and development plans. At the very least, an appreciation of fiscal realities can be balanced against the health, safety, and welfare issues arising in the daily political forum.

A significant number of collection system capital projects are prompted by Regional Transportation Commission (RTC) roadway improvement projects. When RTC projects are funded, master planned sewer lines are incorporated to avoid the cutting of the new pavement for a five year period.

6.2.5 GOALS, OBJECTIVES, POLICIES, AND PROGRAMS FOR SEWER SERVICES IN CENTENNIAL HILLS

Goal: Provide efficient and cost-effective wastewater collection and treatment to support land use and conserve resources.

Policy A1: Size sewer collection line extensions to accommodate designated development densities shown in the adopted Centennial Hills Land Use Categories Map, Wastewater Collection System Master Plan and in accordance with standard engineering design practice.

Program A1.1: Update and maintain accurate collection system database in the City's Geographic Information System (GIS).

Program A1.2: Continue to monitor and record existing sewer line flows and capacities.

Program A1.3: Prepare and adopt a five year Capital Improvement Plan that incorporates the Wastewater Collection System Master Plan that conforms to the adopted Centennial Hills Sector Plan land use maps and text.

Policy A2: Annexation requests in or near the Desert Rural areas which will result in sewer collection line extension or over-sizing shall be evaluated and permitted to incorporate the Wastewater Collection System Master Plan.

Policy A3: Establish an equivalent level of service for the various major categories of land use in order to measure the effects of annexation and development proposals on the wastewater system.

Program A3.1: Establish a quantitative or qualitative service standard for measuring a level of service for use by the City, developers, and other entities.

Program A3.2: Monitor and annually update this standard, in order to assure that it is realistic and measures the consumption of resources.

Policy A4: Develop a process to set priorities that determines the order of funding for wastewater systems.

Program A4.1: Develop and implement a capital programming priority process to incorporate, at minimum, the following:

- a) Projects directly related to protecting public health, safety, and welfare, such as new facilities that reduce or eliminate deficient systems.
- b) Repair and rehabilitation of existing systems.
- c) Infill areas.
- d) Provision of sewer services to county areas should only be given to those projects that comply with the intent of the text and maps that make up the Land Use Chapter of the Centennial Hills Sector Plan.

6.3 WATER DISTRIBUTION SYSTEM

Water in Las Vegas comes from two sources: Surface water and ground water. Rainfall in the Las Vegas Valley is approximately four inches annually. About 30,000 acre feet per year (AFY) is naturally recharged into the ground water system, but that is the result of snow, not the annual rainfall. The major uses of water are for irrigation, municipal and industrial applications. In the Las Vegas Valley Water District service area, residential uses consume about 64% of the water.

Since 1866, Nevada has adhered to the doctrine of prior appropriation. That doctrine states that the first appropriator of water (surface or groundwater) is allowed to satisfy its entire right before subsequent (junior) rights are satisfied. In 1939, a law was enacted by the Nevada State Legislature, giving control of the allocation of groundwater to the State Engineer. The statutes required that all prospective users of groundwater (except single-family homes served by an individual well) obtain a permit from the State Engineer prior to placing the groundwater to a beneficial use. Permits cannot be granted if:

1. The area or groundwater basin is fully appropriated.
2. The project is not in the public interest.
3. Granting a permit for a well would affect existing rights.
4. The application, combined with all other applications, exceeds the amount that can be safely removed without causing an adverse effect on the groundwater system.






Groundwater can be taken only in volumes which can be safely withdrawn. This concept is known as perennial and safe yield. The State Engineer has set a withdrawal goal of 50,000 acre feet per year (AFY). To meet this goal, three major events have occurred which affect groundwater withdrawal. One, community wells, which typically serve small residential subdivisions are no longer permitted by the State Engineer. Two, individual wells on tracts of land smaller than five acres are no longer being permitted. Three, in July 1997, the Nevada Legislature passed a bill requiring the Southern Nevada Water Authority (SNWA) to develop a program to manage ground water in the Las Vegas valley. The primary goal of the Ground Water Management Program is to protect the local ground water basin from over-drafting and from potential sources of contamination. As part of this effort, SNWA is required to perform

MAP NINE

City of Las Vegas

CENTENNIAL HILLS SECTOR

Existing & Proposed Water Mains

-  Existing Water Mains
-  Existing Reservoirs/Wells
-  Proposed Water Mains
-  Proposed Reservoirs/Wells
-  SNWA Delivery Main
-  Under Contract

Adopted December 18, 1996 Bill Number 96-109

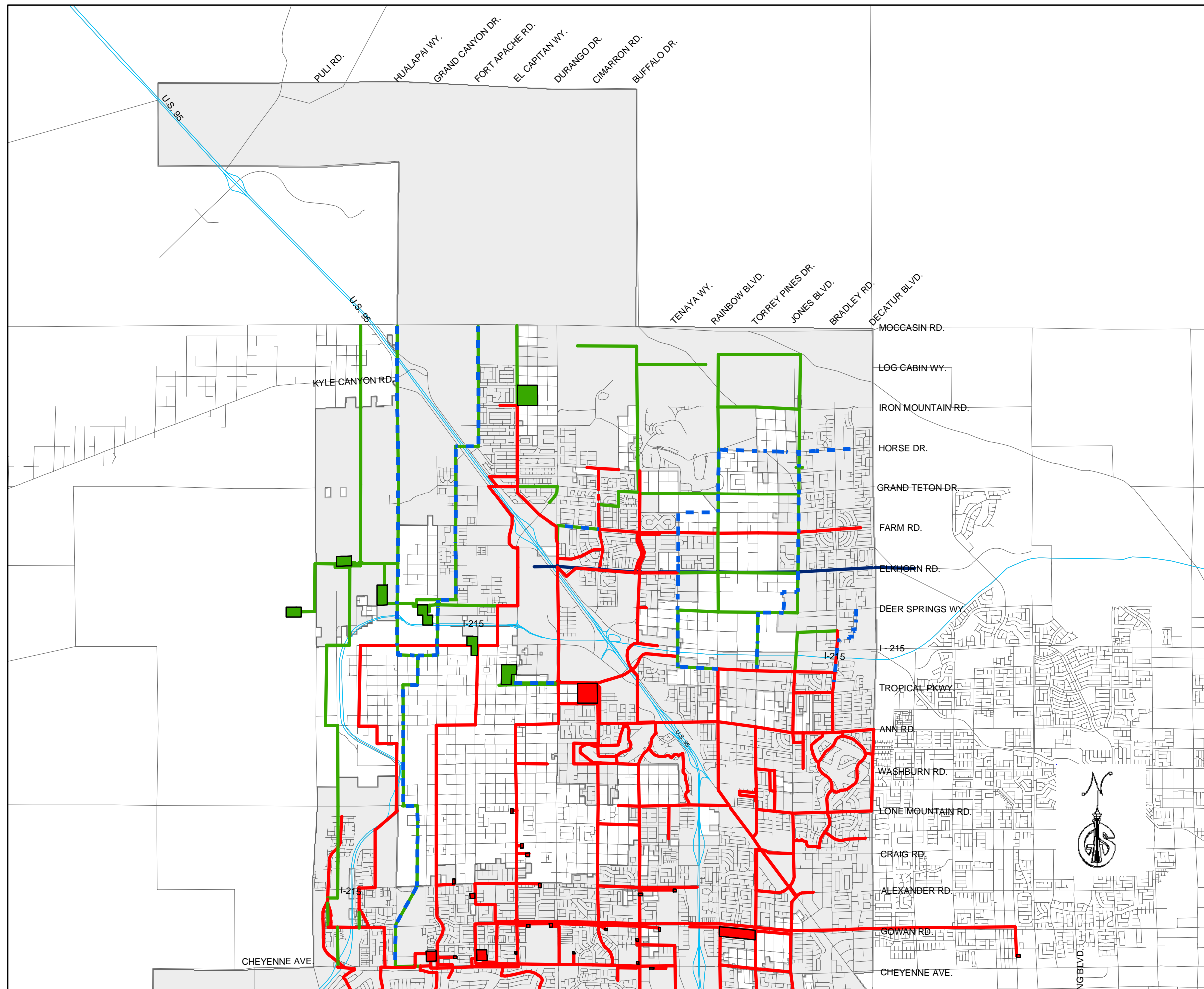
Revised May 24, 1999 GPA-01-99
Revised February 19, 2003 GPA-1392

Source: Las Vegas Valley Water District

Plotted: February 19, 2004



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702-229-6301



a comprehensive inventory of all active and abandoned wells in the valley. This work is currently being conducted in association with the office of the State Engineer. In addition to this the Las Vegas Valley Water District (LVVWD) has a master plan to provide water to the Northwest from the Southern Nevada Water Authority supply line in approximately year 2008. This reservoir and distribution system will cover the Northwest up to elevation 3090 (See Map 9, Centennial Hills Sector Existing and Proposed Water Mains). The distribution system from that supply line for the Centennial Hills area will be constructed as required to meet the needs of future growth.

The Centennial Hills area is generally supplied water by the Las Vegas Valley Water District and in small areas, by North Las Vegas. The City of Las Vegas does not operate its own municipal water supply, which reduces its direct control over system development or distribution of water.

6.3.1 Water Management Issues

While the City is not in direct control of its water source, it is an entity that operates in the interest of the public health, safety, and welfare. City policies in those areas regulate the use of land through planning, zoning, code enforcement, and capital budgeting. There are many ways the City can manage water consumption and provide for its long-term growth. Most means are simple and require little direct cost. Using the General Plan as a basis, the issues that follow are an opportunity to explore and accomplish appropriate means of water management. These include the City seeking new ways to communicate its needs to the District and implementing methods to conserve water. The basic components are: resource conservation, levels of service, intergovernmental coordination, and cooperative water allocation.

6.3.2 Water Conservation.

Water conservation is critical to extending the district's current water resources. Conservation of water can occur through:

- Administrative means, service areas, master annexation plans.
- Technological means (reuse, water saving devices).
- Institutional means (full-cost billing rates, building and landscaping code changes, consumer education, water audits).

The first two items will be discussed here; the third is covered more fully in the General Plan.

Table 5. Las Vegas Valley Water District: Water Consumption By Land Use

| Customer Class / Description | Average Day | | Flow Rates Maximum Day | | Peak Hour | |
|--|-------------|----------|------------------------|----------|-----------|----------|
| | GPM/unit | GPM/acre | GPM/unit | GPM/acre | GPM/unit | GPM/acre |
| Single Family residential | 0.52 | 2.3 | 1.18 | 5.2 | 1.81 | 8 |
| Residential, Duplex and Triplex | 0.52 | 2.3 | 1.18 | 5.2 | 1.81 | 8 |
| Apartments, Condominiums, and Townhouses | 0.21 | 5.7 | 0.53 | 14 | 0.63 | 16.8 |
| Mobile Home parks | N/A | 2.4 | N/A | 3.7 | N/A | 5.7 |
| Hotels | 0.29 | N/A | 0.36 | N/A | 0.45 | N/A |
| Golf Courses, Parks, and open space | N/A | 4.4 | N/A | 8.4 | N/A | 8.4 |
| Industrial Parks (light Industry) | N/A | 1.1 | N/A | 1.5 | N/A | 2.3 |
| Commercial | N/A | 2.1 | N/A | 3 | N/A | 4.6 |
| Schools | N/A | 1.7 | N/A | 3.5 | N/A | 5.4 |

Source: Las Vegas Valley Water District 12/08/98

Each of these above options can be established based on adoption of a General Plan. According to NRS 167 (as amended), Section 19.1, "The District shall comply with planning and zoning ordinances. . . ." Whether or not a master annexation plan or a service area boundary is adopted, the land use designations and other policies and programs of the Plan direct the growth of the Northwest. In this fashion, the Centennial Hills area can attempt to control its future consumption and distribution of water. That allocation can turn on efforts by the Northwest to conserve water and direct growth in a contiguous manner. The City and the District must develop joint policies covering infill and expansion of existing uses.

Technological means of conservation include those products on the market such as low flush toilets, drip irrigation systems, and others developed through experimentation. These might include dual piping systems in developments or pretreatment plants in outlying developed areas. Such plants can treat water to a level safe enough for surface irrigation, thereby offsetting the use of river water for landscape watering. However, reuse of wastewater does not increase the total supply of



potable (Colorado River diversions) and non-potable water (wastewater reuse). Nevada's current permanent Colorado River apportionment is 300,000 acre feet consumptive use. Consumptive use or "net use" is defined in law as diversion less return flows. Because Nevada returns most of its treated wastewater to the river for "return flow credit", it can actually divert more Colorado River water than 300,000 acre feet. If the wastewater is reused rather than returned to the river, the amount of Colorado River water that can be diverted is reduced accordingly.

From a water management standpoint, the decision to reuse wastewater is not a supply issue, because reuse does not increase or decrease the total potable and non-potable supply. Rather, the decision should be based on issues of water quality and erosion in the Las Vegas Wash – which is the means whereby the Valley's treated wastewater is returned to the Colorado river – and issues of facility costs (size and levels of treatment).

6.3.3 Level of Water Service.

There is an expected, quantifiable consumption of water which can be established by type of development. The capacity of the water system to serve each development can be sized to serve that expected growth. This is called a level of service (LOS). The LOS is usually expressed as a quantity per unit of demand.

The District does have service level standards. They are quantitative and are expressed as consumption based on gallons per minute per acre. A single-family detached unit is rated by the District as consuming .52 gallons per minute per acre for average day flow. This consumption per unit per day is 749 gallons of water (based on a household of 2.5 persons), or 273, 385 gallons per year, or .84 AFY per single family detached unit (See Table 5, "Las Vegas Valley Water District: Water Consumption by Land Use").

Establishing water consumption rates is critical in the design of pipes, pump stations, reservoirs, and user fees. From the City's point of view, levels of service are important in designating land uses, allocating population growth, and analyzing the effect of proposed developments on the capacities of the collection and distribution system to provide water. The measurements provide an indicator of demands on water as well as fire, police, sewer, recreational, road, and solid waste services.

Clearly, the importance of a standardized service level (gallons per day/unit) and an agreed upon level of service cannot be underestimated. Such a level notifies citizens, developers, the District, and the City of the potential effects of a land use development proposal. It allows each to calculate the intended effects of growth on finances and the timing of expenditures to support that growth.

A level of service standard may be changed as technology, attitudes, and pricing changes consumption. As such, it is a way to monitor growth which reflects rural consumption patterns and household populations. Linked with conservation efforts, a level of service can help measure the amount of consumptive use and consequently the amount of water available for return flow credits to the Colorado River.

6.3.4 Water System Expansion.

Water is currently supplied by the Water District to the 2745 zone with pipelines under design or construction for the 2860 and 2975 pressure zones. Plans exist for the expansion of the system through the SNWA 60-inch supply line from Lake Mead. The line is expected to be installed along Deer Springs Rd. in the year 2008. This will supplement existing water supplies to the Centennial Hills area. Development of those zones is based on the demand by developers.



6.3.5 GOALS, OBJECTIVES, POLICIES AND PROGRAMS FOR WATER DISTRIBUTION IN CENTENNIAL HILLS

Goal: Efficient, cost-effective provision of public facilities and services.

Objective A: Continue to develop and implement conservation measures to reduce the consumption of water.

Policy A1: Develop cost effective water conservation and waste reduction techniques to reduce water demand.

Program A1.1: Request a professional water audit by the Las Vegas Valley Water District of all City properties in the Northwest.

Program A1.2: Based on the audit, use a Northwest conservation working group to review audit recommendations, and revise relevant City development practices as well as building codes and operating procedures.

Objective B: Coordinate with the Las Vegas Valley Water District (LVVWD) and other entities on the subject of water supply, management, and land use planning.

Policy B1: Coordinate capital and land use planning with the Las Vegas Valley Water District.

Program B1.1: Forward annual population estimates to the LVVWD and Clark County and seek joint use of an annual population figure for water service purposes.

Program B1.2: Request LVVWD input on plan amendments and rezoning issues. Apprise the LVVWD of approved land uses and population projections for the City.

Program B1.3: Attempt to jointly establish and use a level of service (LOS) with the District for the analysis of the effects of proposed development on water supplies and the distribution system.

Policy B2: Develop a master annexation plan in order to properly program City and District and land use policies.

Program B2.1: Jointly inventory and analyze eligible areas for the effects of potential annexation on the land use fiscal resources and services of the City.

Policy B3: Conclude an interlocal agreement with area water service providers in order to help implement the adopted General Plan.

Program B3.1: Initiate formal discussion with the City of North Las Vegas on the subject of responding to requests from developers seeking North Las Vegas water service to their properties in the City or in areas likely to be annexed to the City.

Program B3.2: Attempt to conclude an interlocal agreement with Clark County and North Las Vegas, that prohibits extensions of its water systems by those jurisdictions into the City boundaries or areas identified by the City as likely to be annexed.

Program B3.3: If no interlocal agreement is concluded per Program B3.2, the City should consider prohibiting any rezoning approvals which add to development in areas not identified for service by the City and the Las Vegas Valley Water District.



6.4 FLOOD CONTROL SYSTEM

In the early days of Las Vegas, as in the rest of the southwestern United States, very little attention was paid to flood control.

The City of Las Vegas five-year Capital Improvement Plan includes a schedule for flood control, as do other jurisdictions. The City coordinates its funding needs with those of the Clark County Regional Flood Control District (CCRFCD) and the Regional Transportation Commission (RTC).

The CCRFCD projects are designed to provide a 100-year level of protection and local storm drain projects for a ten-year level of protection. The City has taken the initiative to prepare a comprehensive Neighborhood Flood Control Master Plan that integrates the local neighborhood problem areas with the ten-year local projects and 100-year CCRFCD facilities. The ten-year drainage projects are incorporated with Regional Transportation Commission and private development projects. This program is also integrated with future sewer projects to ensure minimal disruption to neighborhoods, thereby implementing drainage improvements in a cost effective manner. Local problem areas that cannot be resolved by local or RFCD projects are resolved through Neighborhood Drainage Projects.



1. Neighborhood Drainage Projects: These projects represent scattered improvements ranging from small, minor improvements. Generally, the storm drains are of the 18-inch to 30-inch size that discharge into larger existing drainage systems.
2. Local Drainage Projects: These projects provide significant storm drainage protection for a ten-year rainfall event. These improvements are generally placed within the major transportation arterials and drain into RFCD facilities. These facilities normally drain areas less than two square miles and are funded by both the City and private development.

3. Clark County Regional Flood Control District (CCRFCD) Projects:
These projects are entirely funded by the CCRFCD, requiring no funding from the City. These regional facilities drain areas larger than one square mile and sometimes up to 50 square miles ultimately draining into a regional detention basin. The detention basins contain the peak flows for up to seven days releasing the stormwater at a much slower rate. These projects frequently provide the large infrastructure for the smaller Local and Neighborhood Drainage Projects. These funded improvements are shown on Map 10, Centennial Hills Sector Existing and Proposed Flood Control Facilities.

The City of Las Vegas has completed Neighborhood Stormwater Management Plans for approximately 60 square miles within the City limits. These plans provide a comprehensive stormwater management plan that integrates the regional 100-year CCRFCD facilities with the Local ten-year facilities and much needed Neighborhood Drainage Projects.

6.4.1 FLOOD CONTROL ISSUES

Flood control is more than just structures and the safe movement of water to a final discharge point. It is both a land use matter and a design issue. Ultimately, it represents the effective management of City resources through coordinated planning and fiscal management.

The difficulty arises in providing an adequate funding source to construct the Neighborhood and Local Drainage improvements in a timely manner. As development occurs, additional flows are generated and concentrated in street corridors.





The regional collection systems drain into detention basins that may be over 100 acres in size. Most of the time it is empty and offers a potentially valuable recreational resource. Improved public property is at a premium; therefore, the joint use of flood control lands for parks, recreation areas, or open space is important to improving the resource base of the City. Specific examples of such multiple land uses includes baseball facilities, soccer fields, and recreational trails for horses, joggers, bicyclists and pedestrians. Another use would be linear parks that could provide access to larger open spaces and a framework for trails.

MAP TEN

City of Las Vegas

CENTENNIAL HILLS SECTOR

Existing & Proposed
Flood Control Facilities

-  Existing Flood Control Facilities
-  Flood Control Basins
-  Proposed Flood Control Facilities
-  Flood Control Basins

Adopted December 18, 1996 Bill Number 96-109

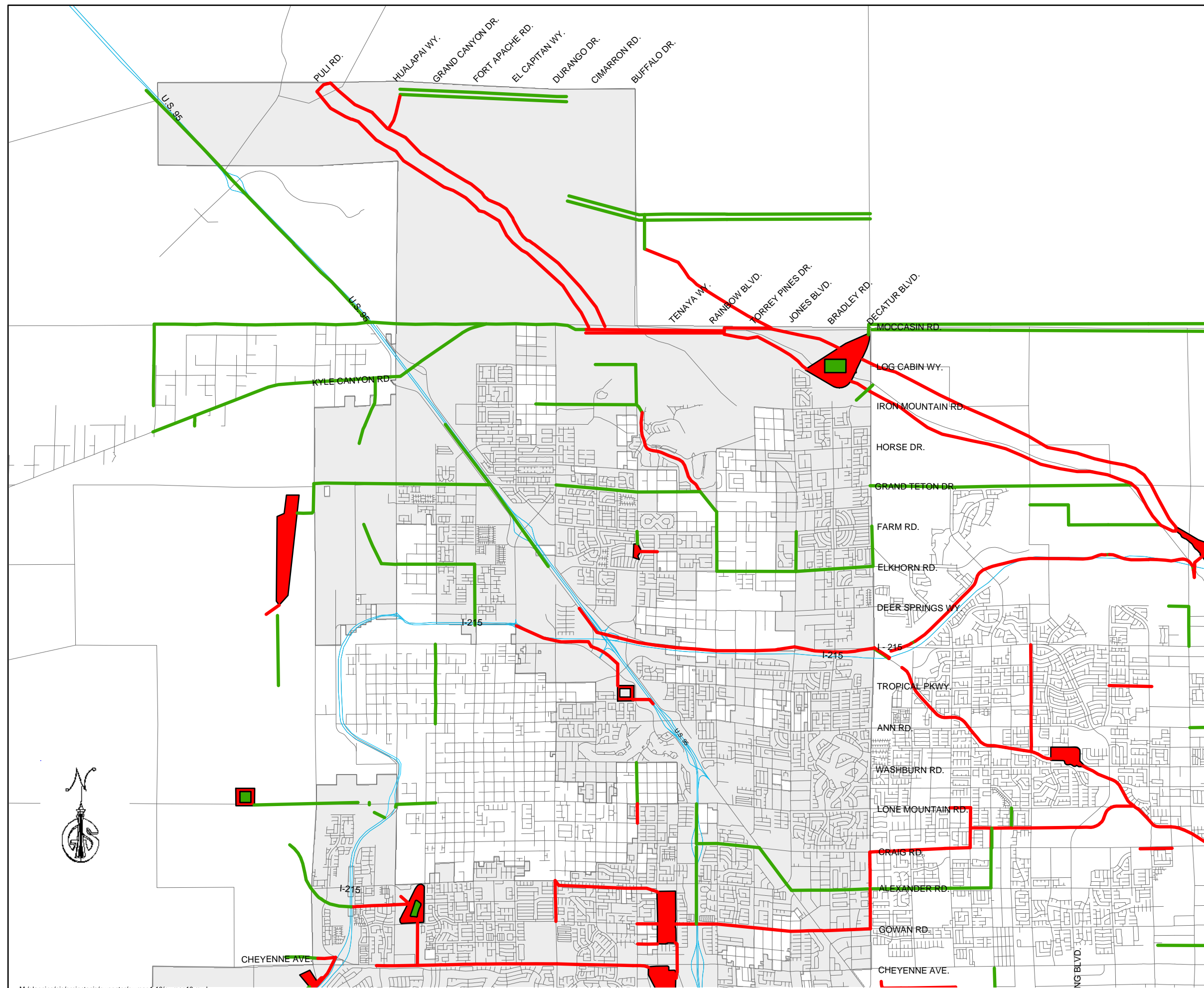
Revised May 24, 1999 GPA-01-99
Revised February 19, 2003 GPA-1392

Source: Clark County Regional Flood Control Districts

Plotted: February 19, 2004



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6.4.2 GOALS, OBJECTIVES, POLICIES AND PROGRAMS FOR FLOOD CONTROL IN CENTENNIAL HILLS

Goal: Efficient, cost-effective provision of public facilities and services.

Objective A: Provide a diversified, efficient flood control system to protect life and property from severe flooding damage and minimize nuisance flow problems at a reasonable cost.

Policy A1: Develop a three-tiered flood control system which will include an appropriate mix of large regional and smaller local and neighborhood flood control facilities.

Program A1.1: Provide drainage improvements in accordance with the Clark County Regional Flood Control Master Plan and Neighborhood Flood Control Master Plans.

Policy A2: Develop and coordinate Neighborhood Master Plans consisting of neighborhood drains and local flood control facilities to safely convey flood and nuisance flows to the larger regional facilities. These plans shall be prioritized as part of the capital facilities programming process.

Program A2.1: Consider the development of a Utility District as a funding mechanism for local and neighborhood storm-drains and related facilities.

Program A2.2: Private developments shall incorporate local and neighborhood drainage facilities with their projects.

Program A2.3: Technical drainage studies will be required for projects over 2 acres or where located in FEMA A Flood Zones. These studies will be reviewed for conformance to the Neighborhood and Regional Master Plans.

Objective B: Have the City continue to participate in a multi-jurisdictional effort to develop, implement, and monitor quality standards for stormwater discharge.

Policy B1: Require drainage design to encourage participation among municipalities, private developers, and regional agencies in the control of flood waters and the use of the storm water drainage system for other purposes such as recreational uses and aquifer recharge.

Program B1.1: Form a joint task force with the City Leisure Services Department, City Public Works Department, Clark County Regional Flood Control District, and the Clark County Parks and Leisure Department to develop an inventory of the existing and proposed drainage systems and their use for recreational facilities.

Program B1.2: Utilize this inventory to prepare a plan for this joint use of flood control and park facilities.



6.5 ELECTRICAL POWER DISTRIBUTION

The current mix of electrical substations and transmission lines located within Northwest Las Vegas are part of a complex electrical network which delivers safe and reliable electrical energy to area residents. Electrical substations are installed on a two-mile grid throughout the Las Vegas valley. They are connected by overhead transmission lines. Once the power reaches a substation, it is transformed and distributed to customers located within roughly a one mile radius. Electrical infrastructure is installed based on electrical demand patterns. In areas of more intense use, such as Town Center, more electrical substations are needed. Based on land use development plans and corresponding electrical power requirements within Northwest Las Vegas, future substations and transmission line corridors have been identified in this plan.

Future substation sites were first identified as part of the 1996 City of Las Vegas Northwest Master Plan Update. The continuing need for these substations was verified as part of the 1998 update to the Master Plan and it was determined that additional facilities were not necessary. The Interlocal Land Use Plan (GPA 1392) was approved by the City Council and County Commission in 2003. The locations for the existing and future substations are:

1. Iron Mountain Road and Decatur Boulevard (existing)
2. Tropical Parkway and Jones Boulevard (existing)
3. Log Cabin Way and Rainbow Boulevard (future)
4. Log Cabin Way and Fort Apache Road (future)
5. Racel Street and Hualapai Way (future)
6. Tropical Parkway between Hualapai Way and the Beltway (future)
7. Fort Apache Road at Elkhorn Road (future)
8. Beltway and Tenaya Way (future)
9. Craig and El Capitan Way (existing)
10. Cheyenne and Durango Road (existing)
11. Cheyenne and Grand Canyon Drive (existing)
12. Rainbow Blvd and Delphinium Ave. (existing)
13. Moccasin Rd and Shaumber Rd (existing)

Additionally, all new electrical substations will be designed with enhanced aesthetic features utilizing low profile equipment, decorative block walls,

drought-tolerant landscaping, and features which integrate well with adjacent development.

In order to lessen community impact, proposed transmission corridors have been planned with consideration given to existing and planned land uses as well as to minimizing the number of corridors established. Joint-use corridors will be encouraged as well as upgrades to existing corridors versus the addition of new corridors. Future and existing transmission corridors and alternative corridors selected are shown on Map 11, Centennial Hills Sector Existing and Proposed Power Corridors, and are briefly described as:

1. Beltway Corridor (future)
2. Decatur North Corridor (future) - Alternative to Jones North
3. Shaumber Road Dual Corridor (one existing, one future)
4. Moccasin Road Triple Corridor (one existing, two future)
5. Puli Drive Corridor (existing)
6. Cheyenne West Corridor (existing)
7. Farm Road West Corridor (future)
8. Rainbow South. to Tropical Pkwy. to Jones Blvd. Corridor (existing)

6.5.1 ELECTRICAL POWER ISSUE

The location and development of power corridors and substations are of critical interest to developers and future property owners. The identification of corridors and substations in a master plan is a public service. It addresses health, safety, and welfare issues for residents and the power provider. Identification of these facilities serves notice of their location and no further entitlement permits will be required. The power provider is expected to conform to these sites and property speculators, in turn, may use this map for the first step in making property purchases and use decisions.

MAP ELEVEN

City of Las Vegas

CENTENNIAL HILLS SECTOR

Existing , Approved & Proposed Power Lines

-  Existing Power Lines
-  Existing Substations
-  Approved Power Lines
-  Approved Substations
-  Proposed Power Lines
-  Proposed Substations

Adopted December 18, 1996 Bill Number 96-109

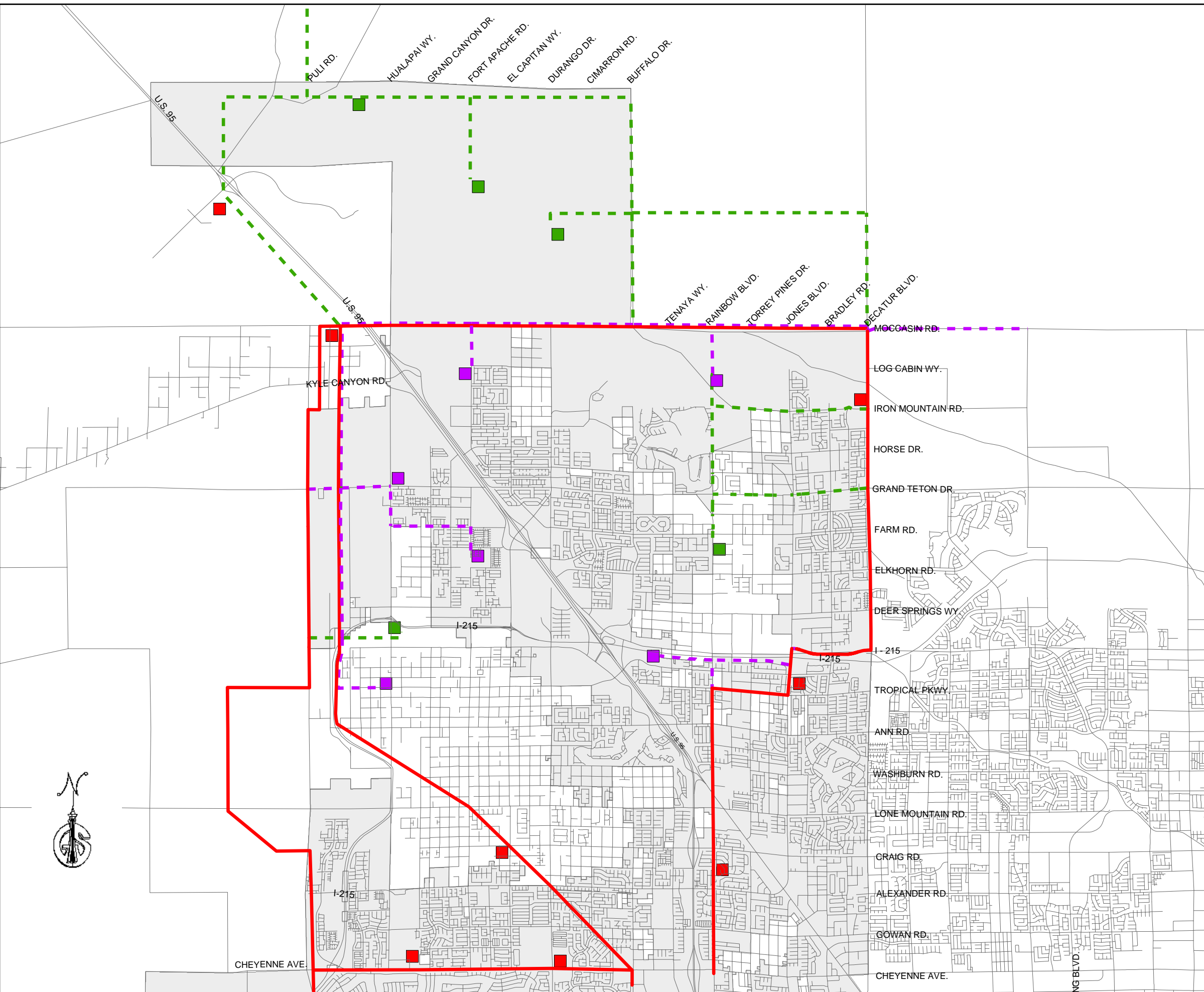
Revised May 24, 1999 GPA-01-99
Revised February 19, 2003 GPA-1392
Revised May 19, 2004 GPA-4044

Source: Nevada Power Company as of May 26, 2004

Plotted: September 9, 2004



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6.5.2 GOAL, OBJECTIVE, POLICIES AND PROGRAMS FOR ELECTRICAL POWER IN CENTENNIAL HILLS

Goal: Designate appropriate Substation sites and Transmission corridors acceptable to the suppliers of electrical power and the residents of the Northwest.

Objective A: Develop and maintain transmission corridors and substations suitable for delivery of electrical services to the Northwest.

Policy A1: Map the transmission systems and substation locations with the assistance of the suppliers of electrical power.

Program A1.1: Update the technically preferred corridor alignments and substation sites into the Centennial Hills Sector Plan.

Policy A2: Unless modified by formal submission to the City Council of the City of Las Vegas, the corridor alignments and substation locations shown on Map 11, Centennial Hills Sector Existing and Proposed Power Corridors shall constitute notice of said sites and corridors. This notice does not waive any current or future applications, processing or permitting requirements not under the control of the City that apply to the siting of these facilities.

7. PLANNING GLOSSARY

A

Americans with Disabilities Act (ADA). A federal regulation that defines the responsibilities of and requirements for facilities to be made accessible to individuals with disabilities.

Apartment. A room, or suite of rooms, within an apartment house which has facilities for the preparation of meals, is designed for and used or intended to be used by one family and is intended to be occupied on a rental basis with a rental period of at least one week.

B

Building Coverage. The ratio of the horizontal area measured from the exterior surface of exterior walls of the ground floor of all principal and accessory buildings on a lot to the total lot area

Building Mass. The height, width and depth of a structure.

Building Scale. The relationship of a particular building, in terms of building mass, to other nearby and adjacent buildings.

C

City Council. The Mayor and City Council of the City Of Las Vegas, Nevada.

Commission. The Planning Commission of the City of Las Vegas.

Congestion. The level at which transportation system performance is no longer acceptable due to traffic interference. The level of acceptable system performance may vary by type of transportation facility, geographic location (metropolitan area or sub-area, rural area) and/or time of day.

County. Clark County, Nevada.

D

Density. The number of families, individuals, dwelling units, households or housing structures per unit of land.

Department. The Planning and Development Department of the City of Las Vegas.

Development Plan. A map or maps that identify in the proposed general land use designations, design standards, transportation plans, open space, and community facilities.

Development Standards. Documentation that identifies the requirements and standards for commercial and residential development,

including, but not limited to: densities; building height, bulk and setback requirements by land use type; signage; landscaping; parking; and open space. The "Design Standards Manual," to the extent adopted by the City Council, contains required development standards for development within the City.

Development. The division of a parcel of land into two or more parcels; the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure; any mining, excavation, landfill or land disturbance; or any use or extension of the use of land.

Director The Director of the Planning and Development Department of the City of Las Vegas.

Dwelling. A structure with one or more rooms that is used exclusively for human habitation; designed, occupied, or intended for occupancy as a separate living quarter with sleeping, cooking, and sanitary facilities provided.

E

F

Fixed Guideway. A transportation system composed of vehicles that can operate only on their own guideways with an extensive collection/distribution system to and from the stations, which are constructed for that purpose. Examples are rapid rail, light rail, automated guideway transit, and monorail. In federal terms, it may also include bus priority lanes, exclusive right-of-way bus operations, and trolley coaches.

Floor Area, Gross. The sum of the gross horizontal areas of all the floors of a building or structure measured from the exterior face of exterior walls, but excluding any space where the floor-to-ceiling height is less than six feet.

Floor Area, Net. The total of all floor areas of a building, excluding stairwells and elevator shafts, equipment rooms, and interior vehicular parking or loading. The term excludes any floors which are not used or intended to be used for human habitation or service to the public.

Floor Area Ratio. The gross floor area of all buildings or structures on a lot divided by the total gross lot area.

G

General Plan. The adopted General Plan or Master Plan of the City, as amended.

Gross Acreage. The total area within the property lines of a lot or parcel of land before public streets, easements, or other areas to be dedicated or reserved for a public use are deducted from such lot or parcel. The term does not include adjacent property that has already been dedicated for such purposes.

Gross Floor Area. The sum of the gross horizontal areas of all the floors of a building or structure measured from the exterior face of exterior walls, but excluding any space where the floor-to-ceiling height is less than six feet.

H

I

J

K

L

Landscaping. The combination of natural elements such as trees, shrubs, ground covers, vines, and other living organic and inorganic material installed for purposes of creating an attractive and pleasing environment; screening unsightly views; reducing environmental heat; filtering particulate matter from the air; and boosting oxygen levels.

M

Manufactured Home. A factory-built, single-family structure that is manufactured under the authority of 42 USC Section 5401, the National Manufactured Housing Construction and Safety Standards Act of 1974, is transportable in one or more sections, is built on a permanent chassis, and is used as a place of human habitation, but which is not constructed with a permanent hitch or other device allowing transport of the unit other than for the purpose of delivery to a permanent site, and which does not have wheels or axles permanently attached to its body or frame.

Manufacturing, Heavy. A facility for the general mass producing of goods, usually for sale to wholesalers or other industrial or manufacturing uses. The term includes any use which employs any of the following or similar types of processes:

1. Milling of grain as retail sales and service.
2. Production of animal food and tanning of animal hides.
3. Production of large durable goods such as, but not limited to: motorcycles, cars, manufactured homes or airplanes.
4. Canning or bottling of food or beverages for human consumption using a mechanized assembly line.
5. Manufacturing of paint, oils, pharmaceuticals, cosmetics, solvents, and other chemical products, and use of a foundry for metals.
6. Production of items made from stone, clay, metal, or concrete.
7. Tire recapping or retreading.
8. Production of items by means of the chemical processing of materials.

Manufacturing, Light. A facility for producing goods without the use of any of the processes described within the definition of "Heavy Manufacturing."

The term includes without limitation the following activities:

1. Assembly, finishing, and/or packaging of small items from component parts made at another location. Examples include but are not limited to: cabinet making or the assembly of clocks, electrical appliances, or medical equipment.
2. Production of items made from materials derived from plants or animals, including, but not limited to, leather, pre-milled wood, rubber, paper, wool or cork, or from textiles or plastics.
3. Electrical component manufacturing.
4. Reproduction, cutting, printing, or binding of written materials, drawings or newspapers on a bulk basis using lithography, offset printing, blue printing, and other similar methods.
5. Machine shop where material is processed by machinery, cutting, grinding, or similar processes.

Map. The Official Zoning Map Atlas of the City of Las Vegas.

Mobile Home. A factory-assembled structure equipped with the necessary service connections and made so as to be movable as a unit on its own running gear and designed to be used for a one-family residential use.

Mobile Home Park. An area or tract of land where two or more mobile homes or mobile home lots are rented or held out for rent. The term does not include an area or tract of land where: (a) More than half the lots are rented overnight or for less than three months for recreational vehicles. (b) Mobile homes are used occasionally for recreational purposes and not as permanent residences.

Multi-family. Used or designed as a residence for three or more families or households living independently of each other.

N

O

Open Space. Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated, or reserved for public use or enjoyment or for the private use and enjoyment of owners and occupants of land adjoining or neighboring such open space.

P

Park and Ride. A method where individuals ride or walk to a central area and transfer to a transit system, or participate in a carpool or vanpool, to their final destination.

Planning Commission. The Planning Commission of the City of Las Vegas duly appointed by the Mayor with the approval of City Council. The Planning Commission shall have the powers and duty to provide for development as prescribed by State law and City ordinances.

Public Hearing. A meeting, announced and advertised in advance and open to the public, in which members of the public have an opportunity to participate.

Q

Quasi-Public Use. A use owned or operated by a nonprofit, religious, or charitable institution and providing educational, cultural, recreational, religious, or similar types of programs.

R

Regional Transportation Improvement Plan (RTP). A document that acts as a statement of regional transportation goals for a 20-year period. The RTP is generally updated approximately every two to three years.

S

T

Transportation Improvement Program (TIP). A budget and planning document that itemizes the transportation projects to be funded within the next five years. By federal regulation, it must be updated at least every two years. A hearing is required before adoption. The Regional Transportation Commission generally reviews and updates the TIP annually, with interim amendments occurring as needed.

U

V

W

